

Exhibit 81

Judith Wolf, M.D.

Page 429

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW JERSEY

IN RE JOHNSON & JOHNSON)
TALCUM POWDER PRODUCTS) MDL NO.
MARKETING, SALES PRACTICES,) 16-2738 (FLW) (LHG)
AND PRODUCTS LIABILITY)
LITIGATION)

IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS
STATE OF MISSOURI

VALERIE SWANN,)
Plaintiff,) Cause No.
v.) 1422-CC09326-03
JOHNSON & JOHNSON, et al.,)
Defendants.)

— — —
Tuesday, September 14, 2021
— — —

Oral Deposition of JUDITH WOLF, M.D.,
VOLUME 2, held at the Fairmont Hotel, 101 Red
River Street, Austin, Texas, commencing at
8:53 a.m. CDT, on the above date, before
Michael E. Miller, Fellow of the Academy of
Professional Reporters, Certified Court
Reporter, Registered Diplomate Reporter,
Certified Realtime Reporter and Notary
Public.

— — —
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Judith Wolf, M.D.

<p>1 APPEARANCES: 2 BEASLEY ALLEN PC 3 BY: MARGARET M. THOMPSON, M.D., ESQUIRE 4 margaret.thompson@beasleyallen.com 5 218 Commerce Street 6 Montgomery, Alabama 36104 7 (334) 269-2343 8 Counsel for Plaintiffs 9 10 ONDERLAW LLC 11 BY: CYNTHIA L. GARBER, ESQUIRE 12 garber@onderlaw.com 13 12 Corporate Plaza Drive 14 Suite 275 15 Newport Beach, California 92660 16 (949)688-1799 17 Counsel for Plaintiffs 18 19 BLASINGAME BURCH GARRARD & ASHLEY PC 20 BY: SARA SCHRAMM, ESQUIRE 21 sschramm@bbga.com 22 440 College Avenue 23 Suite 320 24 Athens, Georgia 30601 25 (706)354-4000 26 Counsel for Plaintiffs 27 28 TUCKER ELLIS LLP 29 BY: MICHAEL C. ZELLERS, ESQUIRE 30 michael.zellers@tuckerellis.com 31 515 South Flower Street 32 42nd Floor 33 Los Angeles, California 90071 34 (213) 430-3400 35 Counsel for Johnson & Johnson Defendants</p>	<p>Page 430</p> <p>1 INDEX 2 JUDITH WOLF, M.D. 3 September 14, 2021 4 5 APPEARANCES 430 6 PROCEEDINGS 436 7 8 EXAMINATION OF JUDITH WOLF, M.D.: 9 BY MR. ZELLERS 436 10 BY DR. THOMPSON 691 11 BY MR. ZELLERS 709 12 BY DR. THOMPSON 722 13 14 CERTIFICATE 728 15 ERRATA 730 16 ACKNOWLEDGMENT OF DEPONENT 731 17 LAWYER'S NOTES 732 18 19 20 21 LITIGATION SUPPORT INDEX PAGE 22 Instruction Not To Answer 590 23 Instruction Not To Answer 591 24 25</p>
<p>1 APPEARANCES: 2 FAEGRE DRINKER BIDDLE & REATH LLP 3 BY: ERIC M. FRIEDMAN, ESQUIRE 4 eric.friedman@faegredrinker.com 5 (via Zoom) 6 300 North Meridian Street 7 Suite 2500 8 Indianapolis, Indiana 46204 9 (317)237-0300 10 Counsel for Johnson & Johnson Defendants</p>	<p>Page 431</p> <p>1 DEPOSITION EXHIBITS 2 NUMBER MARKED 3 Wolf-40 Medical Record(s), 444 4 LBONDURANT_PL_00012 - 5 LBONDURANT_PL_00019 6 Wolf-41 Medical Record(s), 445 7 LBONDURANT_MDAMR_01215 - 8 LBONDURANT_MDAMR_01216 9 Wolf-42 NCI Definition of Gorlin 452 10 Syndrome 11 Wolf-43 The Association Between Talc 480 12 Use and Ovarian Cancer, by 13 Cramer et al 14 Wolf-44 Genital Powder Use and Risk of 482 15 Ovarian Cancer... by Terry 16 et al 17 Wolf-45 Perineal Talc Use and Ovarian 490 18 Cancer... by Penninkilampi 19 et al 20 Wolf-46 Excerpt from Wolf MDL 496 21 Deposition 22 Wolf-47 Talc, Body Powder and Ovarian 497 23 Cancer... by Wentzensen et al</p>

2 (Pages 430 to 433)

Judith Wolf, M.D.

Page 434			Page 436		
1	DEPOSITION EXHIBITS		1	-----	
2	Wolf-48 6/18/21 Godleski Expert Report	595	2	PROCEEDINGS	
3	re: Judkins		3	September 14, 2021, 8:53 a.m. CDT	
4	Wolf-49 Medical Record(s),	615	4	-----	
5	SWANNV_MBMC_0034		5	JUDITH WOLF, M.D.,	
6	Wolf-50 Excerpt from Lydia Huston	618	6	having been previously duly sworn,	
7	Deposition		7	testified as follows:	
8	Wolf-51 4/18/19 Godleski Expert Report	634	8	-----	
9	re: Swann		9	EXAMINATION	
10	Wolf-52 Genital Powder Use and Risk	640	10	-----	
11	for Ovarian Cancer... by Davis		11	BY MR. ZELLERS:	
12	et al		12	Q. Good morning, Dr. Wolf.	
13	Wolf-53 Excerpt from Lydia Huston	655	13	A. Good morning.	
14	Deposition		14	Q. I'd like to ask you some	
15	Wolf-54 Medical Record(s),	661	15	questions about Lynda Bondurant and the case	
16	SWANNV_ELBENDARYA_0035 -		16	that's been filed on her behalf.	
17	SWANNV_ELBENDARYA_0036		17	A. Okay.	
18	Wolf-55 Douching, Talc Use, and Risk	667	18	Q. You have prepared a	
19	of Ovarian Cancer, by Gonzalez		19	case-specific report regarding Ms. Bondurant;	
20	et al		20	is that right?	
21	Wolf-56 Curriculum Vitae	688	21	A. Yes.	
22			22	Q. We marked that yesterday as	
23			23	Deposition Exhibit 6, and you have that in	
24			24	front of you; is that right?	
25			25	A. Yes.	
Page 435			Page 437		
1	PREVIOUSLY MARKED EXHIBITS		1	Q. That report contains your	
2	NUMBER	PAGE	2	case-specific opinions with regard to	
3	Wolf-6	436	3	Ms. Bondurant; is that right?	
4	Wolf-8	575	4	A. Yes.	
5	Wolf-9	610	5	Q. The first 21 pages of	
6	Wolf-20	691	6	Exhibit 6, your report, is the same as the	
7	Wolf-37	470	7	general amended report that we discussed	
8			8	yesterday, correct?	
9			9	A. Yes.	
10			10	Q. Ms. Bondurant had clear-cell	
11			11	carcinoma; is that right?	
12			12	A. Clear-cell carcinoma of the	
13			13	ovary, yes.	
14			14	Q. And it's your opinion, as	
15			15	stated on pages 22 to 24 of your report,	
16			16	Exhibit 6, that talcum powder is a	
17			17	substantial contributing cause of	
18			18	Ms. Bondurant's clear-cell cancer of the	
19			19	ovary; is that right?	
20			20	A. Yes.	
21			21	Q. You did not identify any other	
22			22	contributing causes of Ms. Bondurant's	
23			23	clear-cell ovarian cancer; is that right?	
24			24	A. I'm just relooking just to make	
25			25	sure that -- she did have a family history --	

3 (Pages 434 to 437)

Judith Wolf, M.D.

Page 438	Page 440
<p>1 although her genetic testing was negative, 2 she did have a family history of cancer that 3 was significant.</p> <p>4 Q. Any other contributing causes 5 for Ms. Bondurant's clear-cell ovarian 6 cancer?</p> <p>7 A. She gave a history of 8 endometriosis, but we don't have any 9 pathology or an operative report from her 10 hysterectomy when she had had that prior to 11 know whether that was pathologically 12 confirmed, which is -- endometriosis is 13 confirmed at the time of surgery.</p> <p>14 Q. If, in fact, she did have 15 endometriosis, that would be a contributing 16 cause as well, correct?</p> <p>17 A. It would be a risk factor.</p> <p>18 Q. Any other contributing causes 19 or -- and let me stop there.</p> <p>20 We talked yesterday, and I 21 believe you agreed, that there is a 22 difference between a risk factor and cause; 23 is that right?</p> <p>24 A. Yes.</p> <p>25 Q. You believe that in her case,</p>	<p>1 A. No. There are 300 -- 300,000 2 women every year in the U.S. who have 3 surgeries for ovarian masses, and 20,000 or 4 21,000 of them are ovarian cancer. Having a 5 benign mass on your ovary is not a risk 6 factor for ovarian cancer.</p> <p>7 Q. And in your view, it's not -- 8 well, let me withdraw that.</p> <p>9 You agree that -- strike that.</p> <p>10 Do you agree that a 11 first-degree relative with ovarian or breast 12 cancer increases a woman's risk for ovarian 13 cancer?</p> <p>14 A. So a first-degree relative with 15 ovarian cancer or a first-degree relative 16 with premenopausal breast cancer does, and so 17 she had -- her aunt would not be a 18 first-degree relative. Her mother -- I don't 19 know that we know what age her mother was 20 diagnosed with breast cancer. I don't have 21 that right in front of me. I'd have to look 22 through the records again.</p> <p>23 But those two things, that she 24 has two family members with breast and 25 ovarian cancer, I think is a risk factor,</p>
Page 439	Page 441
<p>1 that talcum powder is a substantial 2 contributing cause, correct?</p> <p>3 A. Yes. Yes.</p> <p>4 Q. She does have other risk 5 factors which may be contributing causes. 6 Is that a fair summary of your 7 testimony?</p> <p>8 A. Well, she had -- her other risk 9 factor that I know for sure that she has was 10 the family history.</p> <p>11 Q. And that's the maternal aunt 12 with ovarian cancer; is that right?</p> <p>13 A. Yes.</p> <p>14 Q. And also a mother that had 15 breast cancer?</p> <p>16 A. I'm just trying to find her 17 family history in my report.</p> <p>18 Q. Page 24, I believe.</p> <p>19 A. Yes. Maternal aunt with 20 ovarian cancer and mother with breast cancer.</p> <p>21 Q. Ms. Bondurant's mother also had 22 an ovarian nonmalignant tumor; is that right?</p> <p>23 A. That's no relationship to 24 ovarian cancer.</p> <p>25 Q. That is not a risk factor?</p>	<p>1 even though her genetic testing is negative.</p> <p>2 Q. This family history increases 3 her lifetime risk of ovarian cancer up to two 4 times; is that right?</p> <p>5 A. Yes.</p> <p>6 Q. Even though Ms. Bondurant 7 tested negative for BRCA, she still was at 8 two times increased risk for ovarian cancer, 9 given her family history of a first-degree 10 relative with breast cancer and maternal aunt 11 with ovarian cancer, correct?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. So given that she has this 14 family history, I think she's still at 15 increased risk.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. Her family history would be a 18 significant contributing cause; is that your 19 opinion?</p> <p>20 A. It's a risk factor.</p> <p>21 Q. All right. It's a risk factor, 22 and it could be a significant contributing 23 cause, fair?</p> <p>24 A. Well, ovarian cancer is a 25 multifactorial disease, and if she had a</p>

4 (Pages 438 to 441)

Judith Wolf, M.D.

Page 442	Page 444
<p>1 genetic predisposition, if we knew that she 2 had one, that would still just be one of the 3 factors that could lead to ovarian cancer, 4 but in and of itself doesn't necessarily 5 cause ovarian cancer.</p> <p>6 Q. It may or may not in a given 7 woman's case, correct?</p> <p>8 DR. THOMPSON: Object to form.</p> <p>9 A. It may or may not what?</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. Cause ovarian cancer or be a 12 substantial contributing cause.</p> <p>13 A. It could be a contributing 14 cause.</p> <p>15 Q. All right. Ms. Bondurant's 16 family also has a significant history of 17 other cancer in her family, correct?</p> <p>18 A. Yes.</p> <p>19 Q. She has a -- or had a brother 20 with non-Hodgkin's lymphoma?</p> <p>21 A. Yes.</p> <p>22 Q. A maternal grandmother with 23 lymphoma?</p> <p>24 A. Yes.</p> <p>25 Q. An aunt with lung cancer?</p>	<p>1 A. Okay.</p> <p>2 Q. We'll mark a portion of the 3 medical records, and specifically a progress 4 note with Dr. Shank from November 13, 2018, 5 pages 12 to 19 of the records that were 6 produced, as Exhibit 40.</p> <p>7 (Whereupon, Deposition Exhibit 8 Wolf-40, Medical Record(s), 9 LBONDURANT_PL_00012 - 10 LBONDURANT_PL_00019, was marked for 11 identification.)</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. And so if you go...</p> <p>14 A. I'm looking at her family history.</p> <p>15 Q. Okay.</p> <p>16 (Document review.)</p> <p>17 A. This one says maternal -- 18 mother with ovarian nonmalignant tumor. 19 Brother alive, nonsmall cell lung cancer and 20 lymphoma. Maternal aunt deceased with 21 ovarian cancer. Maternal grandmother 22 lymphoma, denies history of breast cancer, 23 endometrial cancer and colon cancer.</p> <p>24 ///</p>
<p>1 A. Yes.</p> <p>2 Q. Uncle with throat cancer?</p> <p>3 A. Yes.</p> <p>4 Q. Maternal great aunt with breast 5 cancer?</p> <p>6 A. I don't remember the maternal 7 great aunt. I don't have that right here, 8 but...</p> <p>9 Q. All right. That would be a 10 significant history, correct, if that's, in 11 fact, true?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. It would be a history.</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. First cousin with pancreatic 16 cancer?</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 A. Yeah, I --</p> <p>19 BY MR. ZELLERS:</p> <p>20 Q. Let me show you --</p> <p>21 A. Let me see that part, because I 22 don't have that whole part of her history in 23 front of me.</p> <p>24 Q. That's okay. I'll refresh your 25 recollection here.</p>	<p>1 BY MR. ZELLERS:</p> <p>2 Q. Doctor, let me mark a second 3 record, which I think will contain the other 4 portion of the history that is pertinent.</p> <p>5 Exhibit 41, these are the 6 MD Anderson Cancer Center records or excerpts 7 from them, pages 1215 to 1216.</p> <p>8 (Whereupon, Deposition Exhibit 9 Wolf-41, Medical Record(s), 10 LBONDURANT_MDAMR_01215 - 11 LBONDURANT_MDAMR_01216, was marked for 12 identification.)</p> <p>13 A. So there's a maternal great 14 aunt with cervical cancer, maternal uncle 15 with throat cancer, brother with lymphoma, 16 maternal aunt with ovarian cancer; maternal 17 grandmother, non-Hodgkin's lymphoma; maternal 18 uncle, pancreatic cancer; a lung cancer in an 19 aunt and an uncle, and another uncle.</p> <p>20 That's all I see. I don't see 21 any pancreatic cancer.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. Well, if you look on page 1216, 24 the second page, problem, pancreatic 25 cancer --</p>

Judith Wolf, M.D.

	Page 446	Page 448
1	A. Oh, maternal uncle, yeah.	1 A. Not as far as I'm aware.
2	Maternal uncle.	2 Q. All right.
3	You said something about a	3 DR. THOMPSON: And you did not
4	great aunt who had ovarian cancer?	4 ask a question. You said that --
5	Q. Breast cancer.	5 MR. ZELLERS: Ms. Thompson,
6	A. Lung cancer, lung cancer.	6 please. You can object to form, but
7	I'm not seeing that.	7 we don't need to argue.
8	Q. Look on the first page, if you	8 DR. THOMPSON: Okay. But you
9	will.	9 didn't ask a question, so I'm --
10	A. Breast cancer, maternal aunt.	10 Dr. Wolf was right.
11	Oh, her great aunt. Okay. Daughter, cervix,	11 BY MR. ZELLERS:
12	precancer of the cervix. Okay.	12 Q. Ms. Bondurant's genetic testing
13	Q. You'd agree that this is a	13 identified a pathologic variant of the SDHA
14	significant history of other cancers in her	14 gene and a variant of uncertain significance,
15	family, correct?	15 VUS, in the PTCH1 gene, correct?
16	A. The other cancers don't have	16 A. You know what? Can I see her
17	anything to do with ovarian cancer other than	17 report again? I thought I had it in here,
18	the maternal great aunt with breast cancer.	18 but I don't see it.
19	Q. So it's your testimony that	19 Q. I think you have it in your
20	none of these other cancers are relevant in	20 report, page 23.
21	terms of any increased risk for ovarian	21 A. Oh, I do. Yes.
22	cancer?	22 Q. You agree that she did have a
23	A. So pancreatic cancer can be for	23 genetic mutation, correct?
24	BRCA2 mutations, but she did not have one of	24 A. Not one that is related to
25	those. Lung cancer would not be. Throat	25 ovarian cancer. The SDHA gene is not one
	Page 447	Page 449
1	cancer would not be. Non-Hodgkin's lymphoma	1 that increases the risk of ovarian cancer,
2	would not be.	2 and a variant of uncertain significance
3	Q. Do you agree that her family	3 doesn't mean anything.
4	history of numerous sporadic cancers suggests	4 MR. ZELLERS: Move to strike as
5	some type of genetic predisposition?	5 nonresponsive.
6	DR. THOMPSON: Object to form.	6 BY MR. ZELLERS:
7	A. No. The first thing that comes	7 Q. Is it --
8	to my mind is that with all the lung cancers	8 DR. THOMPSON: Move to -- that
9	and the throat cancer, that maybe there's	9 it was responsive.
10	some smoking in the family, in particular	10 MR. ZELLERS: Okay.
11	knowing that she was a smoker.	11 Ms. Thompson, you can object as to
12	BY MR. ZELLERS:	12 form --
13	Q. Well, that would not impact the	13 DR. THOMPSON: Okay.
14	breast cancer, would it?	14 MR. ZELLERS: -- but you don't
15	A. I didn't mention the breast	15 have to be making commentary as we go
16	cancer. I said the lung cancer and the	16 along.
17	throat cancer.	17 DR. THOMPSON: Well, I can't
18	Q. That would not impact the	18 object to the form of the question
19	pancreatic cancer, correct?	19 when it wasn't a question, and I'm --
20	A. That's not what I said.	20 you made a motion to strike, and I'm
21	Q. I'm asking you a question,	21 saying it was responsive. And I think
22	Doctor.	22 I am allowed to do that.
23	A. And the question?	23 MR. ZELLERS: Well, hopefully
24	Q. Is smoking a risk factor for	24 it won't continue, but --
25	pancreatic cancer?	25 DR. THOMPSON: Well, we'll see

Judith Wolf, M.D.

Page 450	Page 452
<p>1 what the questioning is like. 2 BY MR. ZELLERS: 3 Q. She did have a genetic 4 mutation; that was my question. 5 DR. THOMPSON: Object to form. 6 A. In a gene that is not related 7 to ovarian cancer. 8 BY MR. ZELLERS: 9 Q. Is that a yes? 10 DR. THOMPSON: Object to form. 11 A. In a gene that is not related 12 to ovarian cancer, yes, she had mutation, but 13 it's not related to ovarian cancer. 14 BY MR. ZELLERS: 15 Q. VUS is a mutation where the 16 association with disease is unclear, correct? 17 DR. THOMPSON: Object to form. 18 A. It's a variant, yes, a change 19 in the gene that has unclear significance. 20 BY MR. ZELLERS: 21 Q. VUS mutations are tracked to 22 see how many women with cancer have them; is 23 that right? 24 DR. THOMPSON: Object to form. 25 A. VUSs are tracked to see if</p>	<p>1 BY MR. ZELLERS: 2 Q. Ovarian cancer would be 3 included in the cancers that are being 4 tracked, correct? 5 A. Yes. 6 Q. All right. Are you familiar 7 with Gorlin syndrome? 8 A. Not offhand. 9 MR. ZELLERS: Please mark as 10 Deposition Exhibit 42 a statement from 11 NIH, National Cancer Institute, on 12 Gorlin syndrome. 13 (Whereupon, Deposition Exhibit 14 Wolf-42, NCI Definition of Gorlin 15 Syndrome, was marked for 16 identification.) 17 BY MR. ZELLERS: 18 Q. Have you had a chance to review 19 Exhibit -- 20 A. Yeah. Now that I see it 21 spelled out, I remember vaguely in medical 22 school a long time ago learning about Gorlin 23 syndrome, but... 24 Q. National Cancer Institute says: 25 Gorlin syndrome is caused by a mutation or</p>
<p>1 any -- at any point in the future, there's 2 any relationship to increased risk for 3 cancers. 4 BY MR. ZELLERS: 5 Q. If the same VUS is seen in more 6 woman, then science may identify a new gene 7 that increases the risk of ovarian cancer, 8 correct? That's the reason it's being 9 tracked. 10 DR. THOMPSON: Object to form. 11 A. I didn't understand what you 12 said. It didn't make sense to me. Can you 13 repeat it again, please? 14 BY MR. ZELLERS: 15 Q. Sure. 16 VUSs are tracked, and if the 17 same VUS is seen in more women, then science 18 may identify a new gene that increases the 19 risk of ovarian cancer, correct? That's why 20 it's being tracked. 21 DR. THOMPSON: Object to form. 22 A. They're not being tracked just 23 to look for ovarian cancer. They're being 24 tracked to see if there's any increased risk 25 in men or women of any cancers.</p>	<p>1 change in the PTCH1 gene. 2 Is that right? 3 A. Yes. 4 Q. And that's what Ms. Bondurant's 5 genetic testing showed, a mutation VUS in the 6 PTCH1 gene, correct? 7 DR. THOMPSON: Object to form. 8 A. She had a variant of uncertain 9 significance in the PTCH gene 1. And in 10 Gorlin syndrome, it is not associated with 11 ovarian cancer -- reading this from the 12 National Cancer Institute that you showed 13 me -- it's associated -- 14 BY MR. ZELLERS: 15 Q. Where does it say that it's not 16 associated with ovarian cancer? 17 A. It says it's associated with 18 basal cell skin cancers, medulloblastomas, 19 which are brain cancers, and other types of 20 cancers. It can cause benign, noncancerous, 21 tumors in the jaw, heart or ovaries. 22 Q. It says: And other types of 23 cancer. It doesn't say and other types of 24 cancer that may be benign. 25 DR. THOMPSON: Object to form.</p>

Judith Wolf, M.D.

Page 454	Page 456
<p>1 A. But it says specifically benign 2 tumors of the ovary. 3 BY MR. ZELLERS: 4 Q. Okay. You -- other than what 5 I've just shown you -- don't know about or at 6 least don't recall learning about Gorlin 7 syndrome, correct? 8 DR. THOMPSON: Object to form. 9 A. What you showed me was -- is 10 from the National Cancer Institute, which 11 describes what Gorlin syndrome is, and it 12 specifically says it can cause benign cancers 13 of the ovary, but a very high risk of 14 developing basal cell skin cancers during 15 adolescence or early adulthood. 16 Neither Ms. Bondurant nor any 17 of her family members have any history of 18 that, or medulloblastoma or any type of brain 19 cancer. 20 And this does not list any of 21 the cancers that are in her family as 22 increased risk with Gorlin syndrome. 23 BY MR. ZELLERS: 24 Q. It says in the second and third 25 sentence: They are also at risk of</p>	<p>1 tissues in the body? 2 A. Yes. 3 Q. Inherited means genetic 4 information passes from parent to child; is 5 that right? 6 A. Yes. 7 Q. Ms. Bondurant's mother had a 8 benign -- had a benign ovarian tumor; is that 9 right? 10 A. She did. 11 Q. And a benign ovarian tumor 12 would be consistent with Gorlin syndrome, as 13 you've pointed out, correct? 14 DR. THOMPSON: Object to form. 15 A. It's something that can happen 16 in Gorlin syndrome, but I would expect that 17 either her mother or someone in her family, 18 if this was Gorlin syndrome, had basal cell 19 skin cancers. 20 And, again, this says nothing 21 about it causing ovarian cancer. And why in 22 the world would it say it causes benign 23 ovarian tumors, because that doesn't kill 24 people and ovarian cancer does, if ovarian 25 cancer was one of the cancers that was</p>
<p>1 developing medulloblastoma-type of brain 2 cancer and other types of cancer, correct? 3 A. And the next sentence says: It 4 can also cause benign, noncancer tumors in 5 the jaws, heart or ovaries. And the next 6 sentence says: Other signs and symptoms 7 include a large head, unusual facial 8 features, small pits on the skin or the hands 9 or the feet. 10 There's no -- in her records, 11 there's no indication that she has any of 12 those physical findings that would suggest 13 Gorlin syndrome. 14 Q. Gorlin syndrome is a rare 15 inherited disorder; is that right? 16 A. Yes. 17 Q. That affects many organs and 18 tissues in the body, correct? 19 A. And it's also called basal cell 20 nevoid syndrome because people get basal cell 21 cancers at a young age. 22 MR. ZELLERS: Move to strike as 23 nonresponsive. 24 BY MR. ZELLERS: 25 Q. Does it affect many organs and</p>	<p>1 significantly associated with Gorlin 2 syndrome? 3 Additionally, she doesn't have 4 a mutation that's known to have any clinical 5 significance in this gene, the PTCH1 gene. 6 MR. ZELLERS: Doctor, move to 7 strike as nonresponsive. 8 BY MR. ZELLERS: 9 Q. Here's my question -- 10 DR. THOMPSON: Responsive. 11 BY MR. ZELLERS: 12 Q. My question is: A benign tumor 13 would be consistent with Gorlin syndrome; is 14 that true? 15 DR. THOMPSON: Object to form. 16 A. Multiple benign tumors are 17 consistent with Gorlin syndrome. 18 BY MR. ZELLERS: 19 Q. Thank you. 20 Even if the PTCH1 genes are not 21 directly related to ovarian cancer, do you 22 agree that her family history and PTCH1 23 mutation raises the question that 24 Ms. Bondurant had an inherited mutation? 25 DR. THOMPSON: Object to form.</p>

Judith Wolf, M.D.

Page 458	Page 460
<p>1 A. No, I do not agree with that.</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. I want you to assume that a</p> <p>4 patient comes to you with a genetic mutation,</p> <p>5 maternal aunt with ovarian cancer, mother</p> <p>6 with breast cancer, and she's worried about</p> <p>7 getting ovarian cancer. She's 58, healthy,</p> <p>8 done having children, and still has her</p> <p>9 uterus and ovaries.</p> <p>10 How would you counsel that</p> <p>11 patient?</p> <p>12 DR. THOMPSON: Object to form,</p> <p>13 incomplete --</p> <p>14 A. You said that she has a --</p> <p>15 DR. THOMPSON: Hang on. Object</p> <p>16 to form, incomplete hypothetical.</p> <p>17 A. You said that she has a genetic</p> <p>18 mutation. What is her genetic mutation?</p> <p>19 BY MR. ZELLERS:</p> <p>20 Q. The genetic mutation would be a</p> <p>21 VUS.</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. A VUS of what?</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Doctor, we don't -- I mean --</p>	<p>1 maternal aunt with ovarian cancer, mother</p> <p>2 with breast cancer, and she's worried about</p> <p>3 getting ovarian cancer. She's 58, healthy,</p> <p>4 done having children, still has her uterus</p> <p>5 and ovaries.</p> <p>6 How would you counsel that</p> <p>7 patient?</p> <p>8 DR. THOMPSON: Object to form,</p> <p>9 incomplete hypothetical.</p> <p>10 A. That her family history of</p> <p>11 breast and ovarian cancer may increase her</p> <p>12 risk for ovarian cancer. That the VUS and</p> <p>13 the PTCH1 gene, which I assume is the same as</p> <p>14 what you said before, that's the one we're</p> <p>15 talking about, has no impact on her risk of</p> <p>16 ovarian cancer. That's what I would tell</p> <p>17 her.</p> <p>18 I wouldn't recommend that she</p> <p>19 have any additional testing done or any</p> <p>20 surgical intervention.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Would you recommend a</p> <p>23 prophylactic hysterectomy and a bilateral</p> <p>24 salpingo-oophorectomy?</p> <p>25 DR. THOMPSON: Objection, asked</p>
<p style="text-align: center;">Page 459</p> <p>1 A. Well, you wouldn't know that</p> <p>2 somebody has a VUS unless you knew what that</p> <p>3 VUS was -- what gene it was associated with.</p> <p>4 Q. All right. A VUS in the PTCH1</p> <p>5 gene.</p> <p>6 A. And the question is: What</p> <p>7 would I --</p> <p>8 Q. What would you advise the</p> <p>9 patient? How would you counsel that patient?</p> <p>10 A. That that VUS in the PTCH1</p> <p>11 gene, there's no evidence that increases her</p> <p>12 risk for ovarian cancer.</p> <p>13 Q. So how would you counsel the</p> <p>14 patient? Would you tell her she has no risk</p> <p>15 for ovarian cancer?</p> <p>16 DR. THOMPSON: Object to form,</p> <p>17 asked and answered.</p> <p>18 A. Every woman who has ovaries has</p> <p>19 a risk for ovarian cancer.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. Okay. So is that all the</p> <p>22 counsel you would do?</p> <p>23 A. With her -- tell me what you --</p> <p>24 her family history is again?</p> <p>25 Q. So she has a genetic mutation,</p>	<p style="text-align: center;">Page 461</p> <p>1 and answered.</p> <p>2 A. I already answered that I would</p> <p>3 not recommend any surgery.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. She is at increased risk of</p> <p>6 ovarian cancer. You'd agree with that,</p> <p>7 right?</p> <p>8 A. With her family's history. It</p> <p>9 has nothing to do with the VUS and the PTCH1</p> <p>10 gene.</p> <p>11 Q. What about a woman with no</p> <p>12 family history of cancer, no gene mutations,</p> <p>13 no risk factors except for talc?</p> <p>14 A. She's also at increased risk</p> <p>15 for ovarian cancer.</p> <p>16 Q. And how would you counsel that</p> <p>17 woman?</p> <p>18 A. I would counsel her to stop</p> <p>19 using talc.</p> <p>20 Q. Anything else?</p> <p>21 A. No.</p> <p>22 Q. Ms. Bondurant had a history of</p> <p>23 endometriosis; is that right?</p> <p>24 A. She gave a clinical history.</p> <p>25 We don't have -- I don't have any pathologic</p>

Judith Wolf, M.D.

Page 462	Page 464
<p>1 confirmation of that or surgical 2 confirmation. 3 Q. As we talked yesterday, 4 endometriosis is a risk factor for ovarian 5 cancer; is that right? 6 A. Endometriosis is a risk factor 7 for ovarian cancer. 8 Q. You did not include 9 endometriosis as a potential risk factor for 10 Ms. Bondurant because we do not have 11 pathology or an operative report from her 12 hysterectomy to confirm this. 13 That's on page 24 of your 14 report. Is that right? 15 DR. THOMPSON: Object to form. 16 A. That's not what I -- it says. 17 I said did she have other risk factors, and I 18 listed endometriosis -- 19 BY MR. ZELLERS: 20 Q. The quote I have on page 24 of 21 your report is you did not include 22 endometriosis as a potential risk factor 23 because, quote: We do not have pathology or 24 an operative report from her hysterectomy to 25 confirm this.</p>	<p>1 that or not include that. 2 Q. Well, you're aware that 3 Ms. Bondurant herself, before she passed, 4 reported that she was diagnosed with 5 endometriosis by Dr. Gardner in 1980, 6 correct? 7 A. Yes. 8 Q. She also reported to her 9 gynecologic oncologist, Dr. Shank, that she 10 had a history of endometriosis; is that 11 right? 12 A. Yes. 13 Q. Wouldn't Ms. Bondurant have 14 been a reliable source of information as to 15 whether she had been diagnosed with 16 endometriosis? 17 DR. THOMPSON: Object to form. 18 A. The only way to diagnose 19 endometriosis is via surgery, and I'm not 20 aware that she had any surgery in 1980 that 21 would have confirmed that. 22 BY MR. ZELLERS: 23 Q. So the only legitimate way or 24 viable way to diagnose endometriosis is when 25 a woman has surgery?</p>
Page 463	Page 465
<p>1 Did I miss -- 2 DR. THOMPSON: Object to form. 3 Can you show us the quote? 4 A. Can you show -- because that's 5 not what it says on my report here. 6 BY MR. ZELLERS: 7 Q. So I'm looking at page 24, 8 number 7. 9 A. Yes. 10 Q. This is Exhibit 6. 11 Endometriosis. We do not have pathology or 12 an operative report from her hysterectomy to 13 confirm this. 14 Are those your words? 15 A. Those are my words. What you 16 said before was that I said I discounted this 17 or I did not consider this because we don't 18 have that. 19 Q. All right. So you would 20 include endometriosis as a potential risk 21 factor, fair? 22 A. So I'm saying that -- I'm 23 saying exactly what she says there. She 24 gives a history. I don't have a confirmation 25 of it. So I don't know whether to include</p>	<p>1 A. In order to diagnose 2 endometriosis, the standard way to diagnose 3 it is to do surgery to look to see if you 4 find it. In most women that's done via 5 laparoscopy. Some women have a laparotomy, a 6 bigger incision in the abdomen. 7 There are symptoms of 8 endometriosis, but you can't confirm it 9 without surgery. 10 Q. So you, as a treating 11 physician, if you had a patient who told you 12 that she had been diagnosed with 13 endometriosis, you would not rely on that and 14 you would not believe that patient unless she 15 showed you or proved it to you in some way 16 with medical records? 17 DR. THOMPSON: Object to form. 18 A. I would ask her how was it 19 diagnosed, and if she didn't have a surgical 20 diagnosis, I would assume it was presumed 21 endometriosis without any confirmation. 22 BY MR. ZELLERS: 23 Q. All right. Well, neither 24 Dr. Gardner nor Dr. Shank say presumed 25 endometriosis, do they?</p>

10 (Pages 462 to 465)

Judith Wolf, M.D.

Page 466	Page 468
<p>1 DR. THOMPSON: Object to form. 2 A. That's neither here nor there 3 to me. You asked me what I would do. 4 BY MR. ZELLERS: 5 Q. All right. So you would not 6 believe a patient unless they had a surgical 7 record that they had endometriosis? 8 DR. THOMPSON: Object to form. 9 A. I would not confirm the 10 diagnosis of endometriosis without -- without 11 surgical intervention to prove it. I'm not 12 saying the patient is lying. 13 I'm saying that the patient -- 14 someone may have told her she had 15 endometriosis, but without surgical 16 confirmation, you can't make the diagnosis. 17 BY MR. ZELLERS: 18 Q. So if a patient, 19 hypothetically, came to you and said that 20 they had endometriosis -- 21 A. I would ask them how was it 22 diagnosed. 23 Q. All right. And if they said I 24 had surgical confirmation, you would accept 25 that?</p>	<p>1 the most important thing was figuring out 2 what was going on and taking care of her 3 ovarian cancer. 4 And what he or she -- again, I 5 don't know if it's a man or a woman -- put in 6 their chart, I'm not in charge of that. 7 BY MR. ZELLERS: 8 Q. Same question with Dr. Gardner. 9 It would be -- 10 A. Same answer. 11 Q. -- wrong -- okay. 12 You do rely on your patients to 13 give you their medical history when they come 14 to see you, correct? 15 A. Yes. 16 Q. And do you generally believe 17 women when they give you their medical 18 history? 19 A. I said it's not that I wouldn't 20 believe someone who told me they had 21 endometriosis. I would not consider it 22 confirmed unless I had a diagnosis that 23 confirmed it. 24 Q. And so you would not consider 25 it in a differential diagnosis unless you had</p>
Page 467	Page 469
<p>1 A. Yes. 2 Q. And if they didn't say they had 3 surgical confirmation, you would reject it 4 and consider them not to be truthful, or at 5 least not to have had a history of 6 endometriosis? 7 DR. THOMPSON: Object to form. 8 A. You are putting words in my 9 mouth. What I said was that I would consider 10 it presumed endometriosis without 11 confirmation. 12 BY MR. ZELLERS: 13 Q. Would it have been wrong for 14 Dr. Shank to have accepted her history of 15 endometriosis -- 16 DR. THOMPSON: Object to form. 17 BY MR. ZELLERS: 18 Q. -- without surgical 19 confirmation? 20 DR. THOMPSON: Object to form. 21 A. Dr. Shank is free to do 22 whatever he wants in his medical records, 23 and -- and I can't remember if Dr. Shank was 24 her gynecologic oncologist at the time of her 25 diagnosis, but at the time of her diagnosis,</p>	<p>1 proof, surgical confirmation of 2 endometriosis? 3 DR. THOMPSON: Object to form. 4 BY MR. ZELLERS: 5 Q. Is that your testimony? 6 A. No. A differential diagnosis 7 is when somebody has symptoms or findings, 8 clinical findings or symptoms, and you say 9 what could be causing this? Well, it could 10 be this or this or this. And if one of those 11 things is endometriosis, the way I would 12 confirm that or rule it out would be surgery. 13 And that is the standard of care. 14 Q. Do you agree that 15 endometriosis, if, in fact, Ms. Bondurant had 16 endometriosis, would double a woman's risk of 17 clear-cell ovarian cancer? 18 DR. THOMPSON: Object to form. 19 A. It increases her risk of 20 ovarian cancer for sure -- 21 BY MR. ZELLERS: 22 Q. Would it -- 23 A. -- endometriosis. 24 Q. Would it double her risk? 25 A. The risk is about twice, yes,</p>

Judith Wolf, M.D.

Page 470	Page 472
<p>1 twice the general population. 2 Q. We looked yesterday at 3 Deposition Exhibit 37. You probably don't 4 have it. I'll hand you -- this is 37. 5 MR. ZELLERS: And, 6 Ms. Thompson, I gave it to you 7 yesterday. Can you let the witness 8 just take a look at it just so we 9 don't have to dig out the whole stack? 10 DR. THOMPSON: Yes, of course. 11 THE WITNESS: Thank you. 12 BY MR. ZELLERS: 13 Q. So this is an article, Risk of 14 Gynecologic Cancer According to the Type of 15 Endometriosis, and we looked at this 16 yesterday. 17 A. Yes. 18 Q. First named author is 19 Saavalainen. 20 A. You practiced that last night. 21 Q. This study assessed the risk of 22 gynecological cancer according to the type of 23 endometriosis in women with surgically 24 verified endometriosis; is that right? 25 A. Yes.</p>	<p>1 on her ovary, her risk of ovarian cancer is 2 not 1,000 times -- 3 Q. Well -- 4 A. -- higher than someone who 5 doesn't have endometriosis. 6 Q. The relative risk, at least 7 according to this paper, would be 10.1, with 8 a confidence interval of 5.50 to 16.9, 9 correct? 10 A. That's what the confidence 11 interval is, but if what you're saying is 12 true, and there are a million women in the 13 U.S. who had known proven endometriosis, even 14 if we just took all of them, that would mean 15 that their chance of ovarian cancer was 1,000 16 times higher or 500 times higher than the 17 general population? That's just not true. 18 That's just not true. 19 We'd have way more clear-cell 20 endometrial cancers -- clear-cell ovarian 21 cancers than there are in the U.S. 22 Clear-cell ovarian cancer counts for about 5% 23 of epithelial ovarian cancers, so that would 24 be about a thousand women a year. 25 If a million people had</p>
<p style="text-align: center;">Page 471</p> <p>1 Q. And then if you look on page 1, 2 under Results -- and I think we may have 3 looked at this yesterday in terms of 4 endometriosis, but specifically under 5 Results, these authors found that 6 endometriosis was associated with increased 7 risk of clear-cell of 5.17; is that right? 8 A. Yes. 9 Q. The risk of ovarian cancer was 10 highest among women with ovarian 11 endometriosis, and especially for clear-cell, 12 with a hazard ratio or relative risk of 10.1. 13 A. So that's for women who have 14 their endometriosis on the ovaries. Yes. 15 Endometriosis, in general, is the 5. 16 Q. And if, in fact, a woman had 17 endometriosis on the ovaries, then she would 18 be at a 1000% increased risk of clear-cell 19 ovarian cancer; is that right? 20 DR. THOMPSON: Object to form. 21 A. No, that's not what that means. 22 BY MR. ZELLERS: 23 Q. What does that mean? What 24 would the increased risk be? 25 A. So if someone has endometriosis</p>	<p style="text-align: center;">Page 473</p> <p>1 endometriosis and their risk of getting 2 clear-cell cancer was 500 or 1,000 times 3 greater than somebody who doesn't have it, we 4 would have way more clear-cell cancers than 5 we do. 6 Q. And when you speak of this, 7 you're speaking of women who have been 8 diagnosed with ovarian endometriosis, 9 correct? 10 A. Well, I -- no, I'm speaking 11 that in the United States, approximately 12 a million to 2 million women have 13 endometriosis. 14 Q. All right. So you're not 15 speaking of ovarian endometriosis, which was 16 my question and my reference to the 1,000% 17 increased risk of clear-cell ovarian cancer. 18 A. What percentage of women have 19 ovarian endometriosis? Let's see. That's 20 probably in this study. 21 (Document review.) 22 A. I don't see that in this study. 23 Endometriosis... 24 BY MR. ZELLERS: 25 Q. All right. Well, if we look at</p>

12 (Pages 470 to 473)

Judith Wolf, M.D.

Page 474	Page 476
<p>1 just the --</p> <p>2 A. No. Stop. One second.</p> <p>3 So there were 49,000 women in</p> <p>4 the study and 23,000 had ovarian cancer --</p> <p>5 ovarian endometriosis, so can we round that</p> <p>6 to half.</p> <p>7 And so that would be if</p> <p>8 somewhere between 500,000 and a million women</p> <p>9 had ovarian endometriosis, then their chances</p> <p>10 of getting clear-cell ovarian cancer was</p> <p>11 1,000 times higher than the general</p> <p>12 population, and we would see a lot more</p> <p>13 clear-cell ovarian cancer than we do.</p> <p>14 Q. You're not disputing the</p> <p>15 results. You may be disputing my question</p> <p>16 and my interpretation of the results, but</p> <p>17 you're not disputing that, at least according</p> <p>18 to this article, Deposition Exhibit 37, that</p> <p>19 regardless of the type of endometriosis, this</p> <p>20 study found an increased risk of clear-cell</p> <p>21 ovarian cancer of 5.17, correct?</p> <p>22 A. I'm not disputing that result.</p> <p>23 Q. And similarly, the authors</p> <p>24 found an increased risk -- if it was ovarian</p> <p>25 endometriosis, there was an increased risk of</p>	<p>1 correct?</p> <p>2 A. So endometriosis overall</p> <p>3 increases the risk of ovarian cancer about</p> <p>4 twice. The types of cancer that happen that</p> <p>5 arise in association with or in an area of</p> <p>6 endometriosis more commonly are clear-cell or</p> <p>7 endometrioid type.</p> <p>8 Q. Did you review, in connection</p> <p>9 with your opinion here, Dr. McTiernan's</p> <p>10 testimony in the Forrest trial?</p> <p>11 A. The Forrest trial?</p> <p>12 Q. Yes.</p> <p>13 A. Not that I recall.</p> <p>14 Q. You do respect Dr. McTiernan as</p> <p>15 an epidemiologist, correct?</p> <p>16 A. Yes.</p> <p>17 Q. And you included, I think we</p> <p>18 discussed yesterday, the Forrest plots in</p> <p>19 your report?</p> <p>20 A. The plots, yeah.</p> <p>21 Q. Are you aware that</p> <p>22 Dr. McTiernan testified that the literature</p> <p>23 is consistent with a relative risk of 3 for</p> <p>24 endometriosis and clear-cell ovarian cancer?</p> <p>25 A. What -- I'm not aware of that,</p>
<p>1 clear-cell ovarian cancer of 10.1, correct?</p> <p>2 DR. THOMPSON: Whoa. You're</p> <p>3 talking about the risk ratio reported?</p> <p>4 MR. ZELLERS: Yes, I'm talking</p> <p>5 about what the authors found.</p> <p>6 DR. THOMPSON: All right.</p> <p>7 MR. ZELLERS: The risk --</p> <p>8 DR. THOMPSON: Well, you</p> <p>9 weren't really saying what the authors</p> <p>10 found.</p> <p>11 MR. ZELLERS: I think that was</p> <p>12 in my question, but if not, that's</p> <p>13 what I meant.</p> <p>14 A. The incidence ratio, yes, was 5</p> <p>15 for all endometriosis -- types of</p> <p>16 endometriosis and 10 for ovarian</p> <p>17 endometriosis.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. In terms of an increased risk</p> <p>20 for clear-cell ovarian cancer, correct?</p> <p>21 A. That's correct.</p> <p>22 Q. You know from reviewing the</p> <p>23 literature that endometriosis is associated</p> <p>24 with a high relative risk, especially or</p> <p>25 specifically with clear-cell ovarian cancer,</p>	<p>1 and I'd like to ask: What is the Forrest</p> <p>2 trial? Is that a paper that I should see?</p> <p>3 Q. No. I'm sorry. That's a trial</p> <p>4 much like the Kleiner trial that you</p> <p>5 testified in.</p> <p>6 A. Oh, okay.</p> <p>7 Q. Forrest is the name.</p> <p>8 A. In my head it was a clinical</p> <p>9 medical trial.</p> <p>10 Q. Understood.</p> <p>11 You're just unaware of what her</p> <p>12 testimony was?</p> <p>13 A. I'm unaware of her testimony,</p> <p>14 that's correct.</p> <p>15 Q. Does it sound right that the</p> <p>16 literature is consistent with a relative risk</p> <p>17 of 3 for endometriosis and clear-cell ovarian</p> <p>18 cancer?</p> <p>19 A. It's somewhere 2 or more.</p> <p>20 Q. Okay. Page 23 of your report</p> <p>21 says that clear-cell is a histologic subtype</p> <p>22 associated with genital talcum powder use in</p> <p>23 multiple studies.</p> <p>24 Do you see that?</p> <p>25 A. Yes.</p>

Judith Wolf, M.D.

Page 478	Page 480
<p>1 Q. What studies support your 2 opinion that clear-cell carcinoma is 3 associated with genital talc use? 4 A. So in some of the studies, 5 subtypes were separated out and some were 6 not, and, again, clear-cell is not common. 7 In the -- in the Schildkraut 8 study, they lumped clear-cell with 9 endometrioid and other subtypes, and it was 10 increased risk. 11 In the Terry study, which 12 looked at eight studies, there were enough 13 that they were able to show a statistical 14 significant increased risk of, I think, 1.24. 15 Q. Okay. Terry is the only study 16 that you reviewed or that you're aware of 17 that shows a statistically significant 18 increased risk for clear-cell ovarian cancer, 19 correct? 20 DR. THOMPSON: Object to form. 21 A. As I just said, most of the 22 studies don't have enough or did not separate 23 out clear-cell separately to show a 24 statistical significant increase. 25 The Schildkraut study, when</p>	<p>1 Q. Have you explored the 2 discrepancy in the clear-cell data that's 3 reported in Terry's paper versus the same 4 data on clear-cell that's reported in the 5 Cramer 2016 study? 6 DR. THOMPSON: Object to form. 7 A. No. 8 Can I see those papers? 9 BY MR. ZELLERS: 10 Q. I have Cramer 2016. Let's mark 11 that as Exhibit 43. 12 (Whereupon, Deposition Exhibit 13 Wolf-43, The Association Between Talc 14 Use and Ovarian Cancer, by Cramer 15 et al, was marked for identification.) 16 (Comments off the stenographic 17 record.) 18 A. And the Terry study? Can I 19 have the Terry study? 20 BY MR. ZELLERS: 21 Q. I don't believe I have a copy 22 of Terry. 23 THE WITNESS: Do any of you 24 have the Terry study? 25 ///</p>
<p>1 they looked at the nonserous together, which 2 I believe were endometrioid, clear-cell or 3 undifferentiated, there was a statistical 4 significance. 5 And the Terry study, which took 6 eight studies and looked at them together, 7 there were close to 200 clear-cells, and 8 there was a statistical significance. 9 BY MR. ZELLERS: 10 Q. If we're looking at clear-cell 11 ovarian cancer, the only study that shows a 12 statistically significant increased risk for 13 ovarian cancer is the Terry study, correct? 14 DR. THOMPSON: Object to form. 15 A. Because there were too few 16 cases in most of the studies, that -- yes. 17 BY MR. ZELLERS: 18 Q. Are you aware that the Terry 19 study is based on clear-cell data from the 20 New England Consortium? 21 A. The OCAC Consortium, is that 22 what you're calling the New England 23 Consortium? 24 Q. Yes. 25 A. Yes.</p>	<p>1 BY MR. ZELLERS: 2 Q. Let me see if I've got it. 3 So I did not bring a copy of 4 Terry. 5 A. I need to see them side by side 6 so I can answer questions, comparing them. 7 Q. Let me ask you some questions, 8 and then if you can't answer the questions 9 because you -- 10 A. I want to see them side by 11 side, so -- 12 Q. Doctor, I'm going to ask you 13 questions. If you can't answer the question 14 because you don't have the Terry study in 15 front of you, you can tell me you can't 16 answer the question. 17 A. Okay. 18 DR. THOMPSON: We'll pull it up 19 on the computer. Just hold on a 20 minute. 21 THE WITNESS: Thank you. Okay. 22 MR. ZELLERS: All right. 23 BY MR. ZELLERS: 24 Q. So you now have Terry 2013 25 available to you electronically; is that</p>

Judith Wolf, M.D.

Page 482	Page 484
<p>1 right?</p> <p>2 A. Yes.</p> <p>3 MR. ZELLERS: And we will</p> <p>4 supplement the record and we'll mark</p> <p>5 Terry as Exhibit 44.</p> <p>6 (Whereupon, Deposition Exhibit</p> <p>7 Wolf-44, Genital Powder Use and Risk</p> <p>8 of Ovarian Cancer... by Terry et al,</p> <p>9 was marked for identification.)</p> <p>10 MR. ZELLERS: It's the Terry</p> <p>11 2013 study.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. Are you able to tell the number</p> <p>14 of cases of clear-cell cancers, ovarian</p> <p>15 cancers that Terry is reporting?</p> <p>16 A. 187.</p> <p>17 Q. Are you able to tell the number</p> <p>18 of clear-cell ovarian cancers reported in the</p> <p>19 Cramer 2016 study?</p> <p>20 A. I'm looking for that.</p> <p>21 (Document review.)</p> <p>22 A. I'm assuming it's in one of the</p> <p>23 tables, and I keep fumbling through them.</p> <p>24 I'm sorry. Just give me one minute. Okay.</p> <p>25 114.</p>	<p>1 A. Terry, the results, on</p> <p>2 page 815.</p> <p>3 I don't see a number in the</p> <p>4 results for Cramer. I'll try to add all of</p> <p>5 the patients. 2,000, 3,000 -- there were</p> <p>6 about 4,000, 4500, so there were less</p> <p>7 patients in the Cramer study.</p> <p>8 Q. I want to ask you a couple of</p> <p>9 hypothetical questions. We did that</p> <p>10 yesterday.</p> <p>11 I want you to assume that both</p> <p>12 Cramer 2016 and Terry 2013 are looking at the</p> <p>13 same dataset with respect to clear-cell</p> <p>14 ovarian cancer cases. And I want you to</p> <p>15 assume that Terry is misreporting the number</p> <p>16 of cases of clear-cell, but that Dr. Cramer</p> <p>17 got it right.</p> <p>18 Cramer, at least in his</p> <p>19 publication, 2016, finds no association</p> <p>20 between talc use and clear-cell; is that</p> <p>21 right?</p> <p>22 And I'm looking at page 341.</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. Are we talking about a</p> <p>25 hypothetical situation?</p>
<p style="text-align: center;">Page 483</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. And you're looking where?</p> <p>3 A. Table 4.</p> <p>4 Q. Do you have any understanding</p> <p>5 of why Terry would be reporting 187 cases of</p> <p>6 clear-cell ovarian cancer and Cramer is</p> <p>7 reporting 114 if they obtained the data, the</p> <p>8 clear-cell ovarian cancer data, from the same</p> <p>9 source?</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 A. I'm looking for the total</p> <p>12 number of patients in each study to see if</p> <p>13 they had -- I see that they both were looking</p> <p>14 at the OCAC, the consortium, and I'm looking</p> <p>15 for the total number of patients, because the</p> <p>16 Terry study, their study population was a</p> <p>17 total of -- I mean, that could be one reason,</p> <p>18 that they included or excluded different</p> <p>19 patients. And so even if they were starting</p> <p>20 with the same group, the ones that they</p> <p>21 looked at in the end -- oh, this pooled study</p> <p>22 of 8 case-controlled studies included 8,525</p> <p>23 ovarian cancer cases.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. What are you looking at, Terry?</p>	<p style="text-align: center;">Page 485</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. No. Let me withdraw my</p> <p>3 hypothetical --</p> <p>4 A. Okay.</p> <p>5 Q. -- and let me now ask you the</p> <p>6 question in terms of Cramer 2016 with the</p> <p>7 clear-cell ovarian cancer cases that were</p> <p>8 available that he analyzed, he found no</p> <p>9 association between talc use and clear-cell</p> <p>10 ovarian cancer, correct?</p> <p>11 DR. THOMPSON: Object to form.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. And that's page 341 under</p> <p>14 Discussion on the right-hand side.</p> <p>15 A. Well, can we look at it in the</p> <p>16 results instead of the discussion?</p> <p>17 Q. Before we go to results, Cramer</p> <p>18 states: There was general agreement on risk</p> <p>19 by histologic type of epithelial ovarian</p> <p>20 cancer except that OCAC, O-C-A-C, found an</p> <p>21 association with clear-cell cancer, and we</p> <p>22 did not.</p> <p>23 Did I read that correctly?</p> <p>24 A. That's a sentence in his</p> <p>25 discussion. You read it correctly.</p>

Judith Wolf, M.D.

Page 486	Page 488
<p>1 Q. All right. So hypothetically, 2 if there was an error in the Terry study and 3 that both Terry and Cramer were looking at 4 the same dataset and had the same number of 5 ovarian cancer cases, you would not have any 6 epidemiology to rely on to support your 7 opinion that talcum powder use causes 8 clear-cell ovarian cancer, correct? 9 DR. THOMPSON: Object to form. 10 BY MR. ZELLERS: 11 Q. And that's a hypothetical. 12 DR. THOMPSON: Object to form. 13 A. That's not the case, though. 14 BY MR. ZELLERS: 15 Q. Well, you don't know that 16 that's not the case. 17 DR. THOMPSON: Object to form. 18 A. I don't have any evidence to 19 support that that's the case. 20 If you have some evidence to 21 support that's the case, can you show it to 22 me? 23 BY MR. ZELLERS: 24 Q. Well, we know that both Terry 25 and Cramer obtained their data --</p>	<p>1 insinuate that there's something wrong with 2 the OCAC study. 3 Q. The Terry study is the only 4 study that you are relying upon from an 5 epidemiologic standpoint that shows a 6 statistically significant association between 7 clear-cell ovarian cancer and talcum powder 8 use, correct? 9 DR. THOMPSON: Object to form. 10 A. The Terry study is the study 11 that has the most cases of clear-cell ovarian 12 cancer and found a statistically significant 13 difference. They combined eight studies to 14 find that. 15 And the Schildkraut study found 16 an increased association -- excuse me, 17 significant association of nonserous cancers, 18 which included clear-cell and endometrioid. 19 BY MR. ZELLERS: 20 Q. But was not limited to 21 clear-cell ovarian cancers, correct? 22 A. There were not enough cases, as 23 is the case with most studies. 24 Q. I think we're in agreement that 25 of the studies that you've looked at, Terry</p>
<p style="text-align: center;">Page 487</p> <p>1 (Interruption by the 2 stenographer.) 3 BY MR. ZELLERS: 4 Q. They obtained their data from 5 the same dataset; is that right? 6 A. Well, that's what I'm trying to 7 figure out. In the methods, it's not clear 8 to me that they did. 9 Q. And, Doctor, that's fair, and 10 we've probably gone as far as we can go. 11 On the data Cramer had, he did 12 not find an association between clear-cell 13 ovarian cancer and talc use, correct? 14 DR. THOMPSON: Object to form. 15 A. Cramer's paper did not show a 16 statistical significant difference. Terry's 17 did. 18 BY MR. ZELLERS: 19 Q. And Cramer actually states that 20 OCAC found an association with clear-cell 21 cancer and he did not. Those are the words 22 he uses, correct? 23 A. Those are the words he uses. 24 That does not prove to me that there's 25 something wrong with the OCAC study; does not</p>	<p style="text-align: center;">Page 489</p> <p>1 is the only one, if we're looking just at the 2 clear-cell ovarian cancer subtype, which 3 shows a statistically significant association 4 between talcum powder use and ovarian cancer, 5 correct? 6 DR. THOMPSON: Object to form. 7 A. I will say I think we're in 8 agreement that most of the studies do not 9 have enough clear-cells to show an 10 association. That would be considered 11 underpowered. There's not enough cases. 12 The Terry study had the largest 13 number of cases of clear-cell and it did show 14 a statistical significance. 15 BY MR. ZELLERS: 16 Q. You know that Penninkilampi is 17 a more recent meta-analysis than the Terry 18 study, correct? 19 A. That's correct. 20 Q. Penninkilampi shows no 21 association between clear-cell ovarian cancer 22 and talc use. 23 A. Can I see Penninkilampi's 24 study? 25 Q. Sure.</p>

Judith Wolf, M.D.

Page 490	Page 492
<p>1 MR. ZELLERS: We'll mark 2 Penninkilampi 2018 as Exhibit 45. 3 (Whereupon, Deposition Exhibit 4 Wolf-45, Perineal Talc Use and Ovarian 5 Cancer... by Penninkilampi et al, was 6 marked for identification.) 7 BY MR. ZELLERS: 8 Q. So, Doctor, take as much time 9 as you need to, to look at this, but I'm 10 looking at the Abstract, and I'm looking at 11 the very last couple of lines under Results, 12 before Conclusion. 13 A. Well, I'm looking at Table 2, 14 which separates out the types of ovarian 15 cancer and said that there were three studies 16 that looked at clear-cell, but it doesn't 17 give me the number of clear-cell cases. 18 So I don't know how many 19 clear-cell cases they actually were able to 20 find in this study. 21 Q. If you look at the Abstract 22 under Results, the very last line, 23 Penninkilampi and the authors state: We 24 found an increased risk of serous and 25 endometrioid, but not mucinous or clear-cell</p>	<p>1 figure out how many there were. 2 BY MR. ZELLERS: 3 Q. Would that be important to do 4 to substantiate or validate your opinions in 5 this case? 6 A. It would be additional 7 information. 8 Q. At least as of today, that's 9 not something that you have done, correct? 10 A. It's not. 11 Q. You did not include a separate 12 Bradford Hill analysis for clear-cell 13 carcinoma in your report; is that right? 14 A. I did not. 15 Q. And you've not done a Bradford 16 Hill analysis on the epidemiology of 17 clear-cell ovarian cancer exposure to talcum 18 powder, correct? 19 A. I have not separately, no. 20 Q. Are you aware that the O'Brien, 21 the Berge, the Taher, the Wong, the Mills, 22 the Rosenblatt, and the Cramer 1999 and 23 Cramer 2016 studies find no association with 24 clear-cell ovarian cancer and talcum powder 25 use?</p>
<p>1 subtypes. 2 Is that correct? 3 A. That's what this sentence in 4 the Results of the Abstract says; however, I 5 cannot find in this paper how many 6 clear-cells they actually had to look at to 7 know if there were enough to find statistical 8 significance or not. 9 They only mentioned that they 10 were in three studies, but I don't see 11 anywhere in the paper, in the results, how 12 many clear-cell cases there were in these 13 three studies. 14 Q. What methodology are you using 15 to value Terry differently than Penninkilampi 16 with respect to finding an association 17 between clear-cell ovarian cancer and talcum 18 powder use? 19 DR. THOMPSON: Object to form. 20 A. The difference is I know how 21 many clear-cell cases there were in the Terry 22 study. I can't tell that from the 23 Penninkilampi study. Unless we looked at the 24 three studies that he found clear-cell 25 separated out, and we could add those up and</p>	<p>1 Page 491</p> <p>1 DR. THOMPSON: Object to form. 2 A. They all had small numbers of 3 clear-cell ovarian cancers, and I would not 4 expect them to find an association with such 5 small numbers. 6 BY MR. ZELLERS: 7 Q. Are you aware that these are 8 the only talc epidemiology studies that break 9 out data by clear-cell subtype? 10 DR. THOMPSON: Object to form. 11 A. I know that only some of them 12 did. 13 BY MR. ZELLERS: 14 Q. And you attribute it to low 15 numbers, but you do agree that in none of 16 these studies was an association with 17 clear-cell ovarian cancer found, correct? 18 DR. THOMPSON: Object to form. 19 A. When the numbers are low, it's 20 hard to find an association because you can't 21 make a determination with small numbers. 22 BY MR. ZELLERS: 23 Q. Except for O'Brien and Taher, 24 all of these studies were published before 25 your January 2019 deposition, your MDL</p>

17 (Pages 490 to 493)

Judith Wolf, M.D.

Page 494	Page 496
<p>1 deposition; is that right?</p> <p>2 A. Yes.</p> <p>3 You're talking about the ones</p> <p>4 you just listed?</p> <p>5 Q. Yes.</p> <p>6 A. Yes.</p> <p>7 Q. You testified at your</p> <p>8 January 7th, 2019 deposition that the other</p> <p>9 subtypes are usually so small that there's</p> <p>10 probably enough to know statistical</p> <p>11 significance, such as clear-cell or mucinous.</p> <p>12 And I think that was a typo or that you</p> <p>13 misspoke.</p> <p>14 I'm assuming that what you</p> <p>15 meant to say -- and I'm happy to show you the</p> <p>16 testimony.</p> <p>17 With that background, I'm going</p> <p>18 to ask you a new question.</p> <p>19 Do you agree that the other</p> <p>20 subtypes, such as clear-cell or mucinous</p> <p>21 ovarian cancer, are usually so small that</p> <p>22 there's probably not enough to know</p> <p>23 statistical significance?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. The numbers of cases of those</p>	<p>1 MR. ZELLERS: I'm marking as</p> <p>2 Exhibit 46 one page of your MDL</p> <p>3 testimony, page 241, from January of</p> <p>4 2019.</p> <p>5 (Whereupon, Deposition Exhibit</p> <p>6 Wolf-46, Excerpt from Wolf MDL</p> <p>7 Deposition, was marked for</p> <p>8 identification.)</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. So you see you were asked the</p> <p>11 question: Is it your opinion, Doctor, that</p> <p>12 talcum powder use peritoneally increases a</p> <p>13 woman's risk of all different histologic</p> <p>14 types of ovarian cancer?</p> <p>15 And I'm going down partway</p> <p>16 through your answer, starting at line 15:</p> <p>17 And the other subtypes are usually so small</p> <p>18 that there's probably enough to know</p> <p>19 statistical significance, such as clear-cell</p> <p>20 or mucinous.</p> <p>21 And I believe what you meant to</p> <p>22 say is that: And the other subtypes are</p> <p>23 usually so small that there's probably not</p> <p>24 enough to know statistical significance, such</p> <p>25 as clear-cell or mucinous.</p>
<p style="text-align: center;">Page 495</p> <p>1 small types, and I think that's what I've</p> <p>2 been saying all morning.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. Yes, I believe that you have,</p> <p>5 and I believe that there was an error or that</p> <p>6 you misspoke in your original deposition, and</p> <p>7 I think we've now clarified it.</p> <p>8 Because you do agree that</p> <p>9 because, in your view of the small number of</p> <p>10 cases, that there are not studies that show a</p> <p>11 statistically significant association for</p> <p>12 clear-cell and for mucinous, other than the</p> <p>13 Terry study that we've talked about as it</p> <p>14 relates to clear-cell ovarian cancer,</p> <p>15 correct?</p> <p>16 DR. THOMPSON: Object to form,</p> <p>17 misstates her testimony.</p> <p>18 A. So are you -- can you read me</p> <p>19 what my deposition said? Because I'm very</p> <p>20 confused by that question.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. I don't think we have to take</p> <p>23 the time to clear it up, but I will do it</p> <p>24 just so that we're sure we understand your</p> <p>25 testimony.</p>	<p style="text-align: center;">Page 497</p> <p>1 Is that correct?</p> <p>2 A. So I'm going to say either</p> <p>3 that's what I meant to say or this is another</p> <p>4 mistake, because there's a mistake earlier in</p> <p>5 that answer. It says stromal cells or dermal</p> <p>6 cells, and I would never say dermal cells.</p> <p>7 It was germ cells. So either the reporter</p> <p>8 got it wrong or I misspoke.</p> <p>9 Q. Yes. Either way, we now have</p> <p>10 it corrected. Thank you.</p> <p>11 A. Thank you.</p> <p>12 Q. Are you familiar with the</p> <p>13 Wentzensen 2021 article that's another</p> <p>14 O'Brien article with a coauthor?</p> <p>15 A. Is that a recent one, just came</p> <p>16 out in the last month or so?</p> <p>17 Q. Yes.</p> <p>18 A. Yes.</p> <p>19 Q. Let me show that to you.</p> <p>20 MR. ZELLERS: We'll mark that</p> <p>21 article as Deposition Exhibit 47.</p> <p>22 (Whereupon, Deposition Exhibit</p> <p>23 Wolf-47, Talc, Body Powder and Ovarian</p> <p>24 Cancer... by Wentzensen et al, was</p> <p>25 marked for identification.)</p>

Judith Wolf, M.D.

Page 498	Page 500
<p>1 BY MR. ZELLERS:</p> <p>2 Q. And you're familiar with this</p> <p>3 article that came out recently, 2021,</p> <p>4 correct?</p> <p>5 A. Yes.</p> <p>6 Q. The authors discuss the</p> <p>7 epidemiology regarding the different</p> <p>8 histologic subtypes of ovarian cancer,</p> <p>9 correct?</p> <p>10 A. As that result -- as that</p> <p>11 confers with the previous O'Brien study, the</p> <p>12 ones that they looked at in the previous</p> <p>13 O'Brien study, yes.</p> <p>14 Q. If you go to page 7, left-hand</p> <p>15 column.</p> <p>16 A. Okay.</p> <p>17 Q. It starts: Overall, these</p> <p>18 results consistently demonstrate that there</p> <p>19 is a positive association between talc use</p> <p>20 and serous ovarian cancers and possibly also</p> <p>21 endometrioid tumors.</p> <p>22 Is that right?</p> <p>23 A. That's what the sentence says,</p> <p>24 yes.</p> <p>25 Q. Then they continue: The</p>	<p>1 association.</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. So in your view, we would need</p> <p>4 more cases; and if we had more cases --</p> <p>5 A. Then we could --</p> <p>6 Q. -- that would either give us</p> <p>7 evidence of an association or not of an</p> <p>8 association.</p> <p>9 DR. THOMPSON: Object to form.</p> <p>10 A. Well, in the study with the</p> <p>11 most cases, there is an association.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. Can you answer my question?</p> <p>14 DR. THOMPSON: Actually, I</p> <p>15 don't think there was a question, but</p> <p>16 you can ask it again.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. If we had more cases, then that</p> <p>19 would help us to understand whether there's a</p> <p>20 true etiologic difference or that there is an</p> <p>21 association, correct?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. In this study that does have</p> <p>24 more cases, there is an association.</p> <p>25 ///</p>
<p style="text-align: center;">Page 499</p> <p>1 relationship between talc use and the rarer</p> <p>2 mucinous or clear-cell tumor histotypes is</p> <p>3 more ambiguous, although it is not clear</p> <p>4 whether this is due to true etiologic</p> <p>5 differences or because their rarity makes</p> <p>6 them difficult to study.</p> <p>7 Is that what the authors state?</p> <p>8 A. That's what the authors state,</p> <p>9 which -- the rarity is what I've been talking</p> <p>10 about all morning long.</p> <p>11 Q. You agree with that statement</p> <p>12 by these authors, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. I agree that the rarity is</p> <p>15 probably -- is a likely reason why we can't</p> <p>16 see if there's any difference with the</p> <p>17 different subtypes that are rare.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. It's also possible that it's</p> <p>20 due to true etiologic differences, correct?</p> <p>21 That's a possibility?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. It's hard to answer that</p> <p>24 question when we don't have enough cases in</p> <p>25 most of the studies to know if there's an</p>	<p style="text-align: center;">Page 501</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Well, I understand that. At</p> <p>3 least these authors, the O'Brien authors,</p> <p>4 based upon their review and their study, say</p> <p>5 it's not clear -- well, they say that there</p> <p>6 is not a demonstrated association with</p> <p>7 mucinous or clear-cell tumor histotypes and</p> <p>8 that it's not clear whether this is due to</p> <p>9 true etiologic differences or because their</p> <p>10 rarity makes them more difficult to study.</p> <p>11 That's what these authors</p> <p>12 concluded in their recent study, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. The authors state the</p> <p>15 relationship between talc use and rarer</p> <p>16 mucinous and clear-cell subtypes is more</p> <p>17 ambiguous. Yes, that's what it says.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. All right. Do you agree that</p> <p>20 within the last five years, we have a better</p> <p>21 understanding of how different the five main</p> <p>22 histologic subtypes of epithelial ovarian</p> <p>23 cancer are?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. We have a better idea -- the</p>

Judith Wolf, M.D.

Page 502	Page 504
<p>1 first part of the question was?</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. Sure.</p> <p>4 Over the last five years, we</p> <p>5 now -- you know, medical professionals,</p> <p>6 science professionals, have a better</p> <p>7 understanding that the five main histologic</p> <p>8 subtypes of epithelial ovarian cancer are</p> <p>9 different, correct?</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 A. We have a better understanding</p> <p>12 of molecular changes that are associated with</p> <p>13 different subtypes of epithelial ovarian</p> <p>14 cancer, and five -- I'm assuming the five</p> <p>15 main subtypes that you're referring to would</p> <p>16 be low-grade serous, high-grade serous,</p> <p>17 endometrioid, clear-cell and mucinous? Is</p> <p>18 that what you're referring to?</p> <p>19 BY MR. ZELLERS:</p> <p>20 Q. Yes.</p> <p>21 A. Okay. I believe we understand</p> <p>22 more of the molecular pathways, the molecular</p> <p>23 abnormalities in the different subtypes.</p> <p>24 Q. For example, the genetic</p> <p>25 mutations that are associated with high-grade</p>	<p>1 associated with high-grade serous carcinoma</p> <p>2 are different than the genetic mutations that</p> <p>3 are associated, for example, with clear-cell</p> <p>4 ovarian cancer, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. The common genetic mutations,</p> <p>7 the most common genetic mutations that are</p> <p>8 found in serous cancers versus mucinous</p> <p>9 versus clear-cell, high-grade or low-grade</p> <p>10 serous, are different.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. All right. You're familiar</p> <p>13 with the concept generally that science has</p> <p>14 now discovered different genes become mutated</p> <p>15 in different histologic subtypes, correct?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. Again, the common genes that</p> <p>18 are mutated in high-grade serous are</p> <p>19 different than the genes that are commonly</p> <p>20 mutated in low-grade serous and the other</p> <p>21 subtypes.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. And that helps doctors be able</p> <p>24 to better treat some of the different</p> <p>25 histologic subtypes, correct?</p>
<p style="text-align: center;">Page 503</p> <p>1 serous carcinoma are different than the</p> <p>2 genetic mutations that are associated with,</p> <p>3 for example, clear-cell ovarian cancer,</p> <p>4 correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. The most common genetic</p> <p>7 mutations are different in the different</p> <p>8 subtypes, but if you look at an individual</p> <p>9 patient, the genetic mutations in every</p> <p>10 serous -- every high-grade serous are</p> <p>11 different.</p> <p>12 That statement refers to --</p> <p>13 could refer to the common genetic mutations</p> <p>14 that are found in the different subtypes.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. With that qualification and</p> <p>17 explanation, you agree with my question,</p> <p>18 correct?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 A. No. I think that your question</p> <p>21 was broad and my answer was specific.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. All right. Let me ask it</p> <p>24 again, then.</p> <p>25 Genetic mutations that are</p>	<p style="text-align: center;">Page 505</p> <p>1 A. Unfortunately, in ovarian</p> <p>2 cancer, it hasn't yet made a difference in</p> <p>3 how we treat patients.</p> <p>4 Q. So you treat all of the</p> <p>5 different subtypes of ovarian cancer the</p> <p>6 same; is that your testimony?</p> <p>7 MS. GARBER: Object to the</p> <p>8 form.</p> <p>9 A. No. No, the -- for mucinous</p> <p>10 tumors, we treat them more like GI tumors.</p> <p>11 For low-grade serous, we sometimes use</p> <p>12 different treatments. But for the common</p> <p>13 high-grade lesions, serous, endometrioid,</p> <p>14 clear-cell, we treat them the same.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. Environmental carcinogens, like</p> <p>17 smoking or asbestos, they do not induce all</p> <p>18 of these different genetic mutations; is that</p> <p>19 right? I mean, they, by and large, induce</p> <p>20 one type of genetic mutation, correct?</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. Are you saying that smoking</p> <p>23 only induces one type of genetic mutation?</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. I'm asking you if that is</p>

20 (Pages 502 to 505)

Judith Wolf, M.D.

Page 506	Page 508
<p>1 something you are knowledgeable about or not. 2 DR. THOMPSON: Object to form. 3 A. I'm going to say I'm not 4 entirely knowledgeable about all the genetic 5 mutations that smoking can cause, but I'm not 6 aware that there's a single one. 7 BY MR. ZELLERS: 8 Q. Do you agree that talc does not 9 cause mucinous ovarian cancer? 10 DR. THOMPSON: Object to form. 11 MS. GARBER: Object to the 12 form. 13 A. Mucinous ovarian cancer is one 14 of those rare cancers that I don't know that 15 there's enough in any one study to show a 16 statistical significant difference or not. 17 Again, not that many studies 18 separate out the subtypes, so I don't know 19 that there's enough information. There's 20 certainly not enough information to say it 21 does not cause mucinous cancer. 22 BY MR. ZELLERS: 23 Q. When you reviewed 24 Dr. Clarke-Pearson's deposition in 25 preparation for your deposition, did you see</p>	<p>1 MS. GARBER: Join. 2 A. So I'm going to state what I 3 stated before: I don't know that there's 4 enough cases of mucinous separated out, and I 5 would -- to say that. 6 DR. THOMPSON: Let us know when 7 it's a good time for a break in the 8 next new minutes. 9 MR. ZELLERS: You guys can take 10 a break right now, if you'd like. 11 THE WITNESS: Can I say, are we 12 almost done with this case or do you 13 have quite a bit more with this first 14 case? 15 MR. ZELLERS: I have quite a 16 bit more on this first case. 17 THE WITNESS: Okay. 18 MR. ZELLERS: Off the record. 19 (Recess taken, 10:13 a.m. to 20 10:24 a.m. CDT) 21 BY MR. ZELLERS: 22 Q. Dr. Wolf, do you agree that 23 Bradford Hill does not apply to specific 24 causation? 25 DR. THOMPSON: Object to form.</p>
<p>1 that he testified that talc does not cause 2 mucinous ovarian cancer? 3 DR. THOMPSON: Object to form. 4 MS. GARBER: Object to the 5 form, misstates his testimony. 6 A. I don't recall what his 7 testimony said about mucinous cancers. 8 BY MR. ZELLERS: 9 Q. I'm going to quote this and you 10 can -- I'm going to ask a question at the end 11 whether you agree or disagree. 12 MR. ZELLERS: Counsel, you can 13 object if you need to. 14 BY MR. ZELLERS: 15 Q. I'm reading from 16 Dr. Clarke-Pearson's deposition, page 699, 17 line 15. 18 QUESTION: So if I understand 19 you, talcum powder causes all epithelial 20 ovarian cancers except mucinous; is that 21 right? 22 ANSWER: Yes, that's correct. 23 Do you agree with that answer? 24 DR. THOMPSON: Object to form. 25 That's not the complete testimony.</p>	<p>1 A. Bradford Hill looks at 2 causation. Are you asking does it -- what do 3 you mean, specific causation? 4 BY MR. ZELLERS: 5 Q. So specific causation would be 6 whether, in an individual case, talcum powder 7 caused ovarian cancer. So let me ask this. 8 Do you agree that the Bradford 9 Hill criteria cannot be applied to determine 10 whether talc caused an individual woman's 11 ovarian cancer? 12 DR. THOMPSON: Object to form. 13 A. So when I'm looking at cause of 14 an individual woman's cancer, such as 15 Ms. Bondurant, I look at all of the risk 16 factors and all of the protective factors, 17 everything in the patient's history and 18 pathology, whatever I have to review. 19 I don't believe I call that a 20 Bradford Hill. I would call that a 21 differential diagnosis, review of the 22 evidence, evidence -- whatever evidence there 23 is. 24 But I'm going to say on a 25 day-to-day basis, when I take care of</p>

Judith Wolf, M.D.

Page 510	Page 512
<p>1 patients, I don't consider each individual 2 patient a Bradford Hill. It's a similar 3 process, but that's not what I would call it. 4 BY MR. ZELLERS: 5 Q. In Ms. Bondurant's case, what 6 was your methodology for determining that 7 talcum powder was a substantial contributing 8 cause of her clear-cell ovarian cancer? 9 A. So reviewing everything that I 10 had to review from her, which was medical 11 records, the PPF -- I think it's called a 12 PPF -- her daughter's deposition, all the 13 things that I had to review, and knowing what 14 the risk factors for ovarian cancer are and 15 protective factors are, evaluating those in 16 her case. 17 Q. Have you reviewed any published 18 medical literature that provides you with a 19 methodology to determine the specific cause 20 of an individual woman's ovarian cancer? 21 DR. THOMPSON: Object to form. 22 A. So just the tenets of 23 evidence-based medicine, which I think are 24 reviewed -- I looked at before my deposition, 25 reviewing to -- my old deposition, and up to</p>	<p>1 DR. THOMPSON: Object to form. 2 A. All the possibilities, yes. 3 BY MR. ZELLERS: 4 Q. Isn't the critical component of 5 a differential diagnosis the search for a 6 diagnosis? 7 DR. THOMPSON: Object to form. 8 A. So the goal in trying to find a 9 diagnosis is, yes, to find out what the 10 diagnosis is, and the goal of finding out a 11 cause would be to see what the risk factors 12 are, to see what's the most likely cause or 13 causes. 14 In a disease like ovarian 15 cancer, it's multifactorial, so there may be 16 multiple risk factors. 17 BY MR. ZELLERS: 18 Q. The signs and symptoms of 19 ovarian cancer include abdominal distension, 20 bloating, pelvic pressure, generalized 21 wasting of extremities; is that right? 22 A. So abdominal bloating, pelvic 23 pain/pressure, early satiety, low back pain, 24 fatigue, changes in bowel or bladder 25 function. I wouldn't list wasting of the</p>
<p>1 date, just to get a definition of what I do 2 every day. I don't generally look that up 3 because it's just something that sort of 4 comes natural after 30 years. 5 BY MR. ZELLERS: 6 Q. You conducted a differential 7 diagnosis based on a series of questions; is 8 that right? 9 A. Yes. 10 Q. And you're the one that came up 11 with those questions, correct? 12 A. Yes. 13 Q. Do you agree that a 14 differential diagnosis is a list of possible 15 diseases that could be causing a patient's 16 symptoms? 17 DR. THOMPSON: Object to form. 18 A. That could be one way of 19 looking at a differential diagnosis, or a 20 list of different risk factors that could be 21 causing a patient's illness. 22 BY MR. ZELLERS: 23 Q. To perform a differential 24 diagnosis, you have to consider competing 25 diagnoses; is that right?</p>	<p>1 extremities as a common symptom for women 2 with ovarian cancer. 3 Q. Those signs and symptoms, and 4 in your differential, the competing diagnoses 5 would be bowel obstruction, fibroids, 6 cirrhosis and ovarian cancer; is that right 7 here? 8 DR. THOMPSON: Object to form. 9 A. The challenge with the symptoms 10 of ovarian cancer is they are quite vague, so 11 it could be as simple as IBS and as 12 complicated as colon cancer, a bladder 13 infection. Multiple things can cause the 14 same symptoms. That's why it's a challenge 15 to find ovarian cancer because the symptoms 16 are so nonspecific. 17 BY MR. ZELLERS: 18 Q. There's no issue with the 19 diagnosis in Ms. Bondurant's case, though? 20 You agree that she was correctly diagnosed 21 with clear-cell ovarian cancer; is that 22 right? 23 A. Yes. 24 Q. When you practiced as a 25 clinician, you wouldn't use a differential</p>

Judith Wolf, M.D.

Page 514	Page 516
<p>1 diagnosis to identify the cause of any 2 woman's ovarian cancer; is that right? 3 DR. THOMPSON: Object to form. 4 MS. GARBER: Object to the 5 form. 6 A. I would use a differential -- I 7 don't know what else to call it other than a 8 differential diagnosis. 9 BY MR. ZELLERS: 10 Q. As I understand your 11 methodology for determining that talc was the 12 specific cause of Ms. Bondurant's ovarian 13 cancer, what you did is you looked at her 14 other potential risk factors and her talc 15 use; is that right? 16 DR. THOMPSON: Object to form. 17 A. I looked at all the medical 18 records that I had available for her, which 19 included her medical history, her risk 20 factors. I looked at the deposition of her 21 daughter, the PPF, everything that I had 22 available to review to assess. 23 BY MR. ZELLERS: 24 Q. You did not need, in this case 25 or in any of the cases, a report from</p>	<p>1 Q. All right. You testified to 2 the jury in the Kleiner case that ovarian 3 cancer is multifactorial, correct? 4 A. Yes. 5 Q. And you've testified to that in 6 this deposition; is that right? 7 A. Yes. 8 Q. In Kleiner, you told the jury 9 that a cell is like a Jenga game. You pull 10 out a block -- you pull a block out until the 11 tower falls. 12 So talc could be an 13 environmental factor that can pull a block 14 out. BRCA could be a factor that pulls out 15 another block, until the whole thing falls 16 down. 17 Is that the analogy? 18 A. Yeah, I was trying to come up 19 with something that -- visual that people 20 could understand the concept of a 21 multifactorial disease. 22 Q. You agree that science doesn't 23 really know what causes ovarian cancer, with 24 the exceptions that we talked about 25 yesterday? The genetic mutations that I</p>
<p>1 Dr. Godleski either finding or not finding 2 particles, correct? 3 DR. THOMPSON: Object to form. 4 A. In Ms. Bondurant's case, I have 5 not yet seen a report of -- from 6 Dr. Godleski, but as I stated in my report, 7 if there are particles or fibers in her 8 tissue, it would support causation, but I 9 don't think it's a requirement. 10 BY MR. ZELLERS: 11 Q. The absence of a finding of 12 talc fibers or particles by Dr. Godleski in 13 this or in any case does not negate or change 14 an opinion that you formed as to causation 15 between talc use and a particular woman's 16 ovarian cancer? 17 A. If the rest of the history of 18 talc usage supported talc, it would not, 19 because Dr. Godleski gets a few blocks from a 20 small amount of the tissue that's removed and 21 never has access to all of the tissue. 22 So the fact that the few blocks 23 that he sees and can analyze doesn't show 24 talc particles or fibers doesn't mean there 25 aren't any there.</p>	<p>1 believe we agreed were 10 to 15% of the cases 2 of ovarian cancer, talc, which at least 3 Dr. Cramer ascribes 10% of the cases. 4 But other than that, we really 5 don't know what causes ovarian cancer; is 6 that right? 7 DR. THOMPSON: Object to form. 8 A. So ovarian cancer, like all 9 cancers, is caused by a series of genetic 10 mutations. In some cases in ovarian cancer, 11 we know what those mutations are because it's 12 something that the patient inherited. In 13 many cases, we don't know where those 14 mutations came from. 15 And Dr. Cramer's paper actually 16 said that 10% of ovarian cancers could be 17 prevented if talc use was eliminated, not 18 that it caused 10% of ovarian cancer cases. 19 So we definitely know that 20 ovarian cancer is caused by a series of 21 genetic mutations. In some cases, we know 22 what caused them; and in some cases, we 23 don't. 24 BY MR. ZELLERS: 25 Q. If there's a substantial number</p>

Judith Wolf, M.D.

Page 518	Page 520
<p>1 of cases where we don't know the cause of a 2 woman's ovarian cancer -- and let me back up. 3 We agreed, I think, yesterday 4 that a woman can have -- you know, be tested 5 positive for BRCA, but BRCA may not cause her 6 ovarian cancer, correct? 7 A. Yes. A mutation of BRCA. 8 Q. A mutation in BRCA. 9 A woman may use talc or be 10 exposed to talc, but it's possible that talc 11 does not cause her ovarian cancer, correct? 12 A. It's possible that she uses 13 talc and does not get ovarian cancer. 14 Q. So given that, how, in any 15 individual woman, can you ever determine the 16 actual cause of her ovarian cancer? 17 DR. THOMPSON: Object to form. 18 A. Given what? 19 BY MR. ZELLERS: 20 Q. Well, a woman can have a risk 21 factor for ovarian cancer and get ovarian 22 cancer from something totally different, 23 correct? 24 DR. THOMPSON: Object to form. 25 A. Well, I think -- I thought what</p>	<p>1 DR. THOMPSON: I don't care if 2 she answers it, but generally you wait 3 for an answer before you ask another 4 question. I'm just saying. 5 MR. ZELLERS: Okay. Is it okay 6 if we continue? I mean, the witness 7 and I, I think, are doing okay. 8 DR. THOMPSON: You don't need 9 my permission to continue. 10 MR. ZELLERS: Okay. 11 BY MR. ZELLERS: 12 Q. So, Doctor, I guess let's go 13 back and try to start over here. 14 We talked yesterday that a 15 woman -- a hypothetical woman may have five 16 different risk factors for ovarian cancer and 17 that we don't know specifically which of 18 those risk factors, or if any of those risk 19 factors, actually caused her ovarian cancer. 20 Is that -- that hypothetical 21 is -- can be accurate, correct? 22 DR. THOMPSON: Object to form. 23 MS. GARBER: Object to the 24 form. 25 A. So are you asking me about a</p>
<p>1 we were talking about is that a woman can 2 have a risk factor for ovarian cancer and not 3 get ovarian cancer, but if she has that risk 4 factor and she gets ovarian cancer, I would 5 generally attribute that risk factor as part 6 of the reason that she got -- a cause of her 7 cancer. 8 BY MR. ZELLERS: 9 Q. But we don't know that's true 10 in any individual woman's case; is that 11 right? 12 DR. THOMPSON: Object to form. 13 BY MR. ZELLERS: 14 Q. I mean, a woman may have -- and 15 this may go back to the -- 16 DR. THOMPSON: Did you want her 17 to answer that question or not? 18 Well, you went immediately into 19 another question before she answered 20 your first one. But if you don't want 21 her to answer, that's fine. 22 BY MR. ZELLERS: 23 Q. Is there a question that you 24 feel is pending you need to answer, Doctor? 25 I don't want to stop you --</p>	<p>1 hypothetical? I'm not sure what your 2 question is. 3 BY MR. ZELLERS: 4 Q. Yeah. Let's talk about a 5 hypothetical here. 6 A. Yes. 7 Q. So we have a woman who has 8 hormone replacement therapy, who has age, who 9 has obesity. 10 What are a couple of other risk 11 factors for ovarian cancer that we'll put in 12 our hypothetical? 13 A. Well, we can give her 14 endometriosis and make her infertile. How 15 about that? 16 Q. Hormone replacement therapy, 17 age, obesity, endometriosis? 18 A. Infertility. 19 Q. Infertility. 20 If this hypothetical woman with 21 these risk factors develops ovarian cancer, 22 it's impossible to say what the cause of her 23 ovarian cancer is, correct? 24 DR. THOMPSON: Object to form. 25 A. I would say that each of those</p>

Judith Wolf, M.D.

Page 522	Page 524
<p>1 things can be a cause of her ovarian cancer.</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. They can be. It's possible.</p> <p>4 But we can't say to a probability which, if</p> <p>5 any, of those things caused her ovarian</p> <p>6 cancer, correct?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 MS. GARBER: Object to the</p> <p>9 form.</p> <p>10 A. It would be my assumption that</p> <p>11 it was all of those things were a cause of</p> <p>12 her ovarian cancer.</p> <p>13 BY MR. ZELLERS:</p> <p>14 Q. So your methodology and the way</p> <p>15 you approach these cases is that if a woman</p> <p>16 has a risk factor for ovarian cancer, you</p> <p>17 assume that those risk factors actually are</p> <p>18 contributing causes; is that right?</p> <p>19 A. I assume that they may be a</p> <p>20 contributing cause.</p> <p>21 Q. And that's your methodology</p> <p>22 with respect to talc use? If a woman has a</p> <p>23 history of talcum powder use, just as you</p> <p>24 assume that family history, hormone</p> <p>25 replacement therapy, age, obesity would be</p>	<p>1 You agree with that, right?</p> <p>2 A. Yes.</p> <p>3 Q. Let's take BRCA as an example.</p> <p>4 We know the science on the percentage by</p> <p>5 which a woman's risk of ovarian cancer is</p> <p>6 increased if she's BRCA positive, correct?</p> <p>7 A. Yes.</p> <p>8 DR. THOMPSON: Object to form.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. In your report, page 4, you</p> <p>11 state that if you're BRCA1 -- if a patient is</p> <p>12 BRCA1, you have a 39 to 40% lifetime risk of</p> <p>13 developing ovarian cancer, correct?</p> <p>14 A. Yes.</p> <p>15 Q. If you have BRCA2, you have an</p> <p>16 11 to 27% increased lifetime risk of ovarian</p> <p>17 cancer; is that right?</p> <p>18 A. Yes.</p> <p>19 DR. THOMPSON: Object to form,</p> <p>20 just by leaving out the gene mutation</p> <p>21 when you say BRCA1 and BRCA2.</p> <p>22 MR. ZELLERS: I'm trying to</p> <p>23 read from the doctor's report.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Am I reading this inaccurately,</p>
<p>1 contributing causes to her ovarian cancer, if</p> <p>2 she has talc use, you believe that's a</p> <p>3 contributing cause as well, fair?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. If, in reviewing the whole</p> <p>6 thing, she -- there was adequate evidence</p> <p>7 that she had talc use, I would consider that</p> <p>8 a cause of her cancer.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. If she has a family history, if</p> <p>11 she has hormone replacement therapy, if she</p> <p>12 has age, if she has obesity that rise to the</p> <p>13 level of risk factors, you would also say</p> <p>14 those are contributing causes to her ovarian</p> <p>15 cancer, correct?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. Again, ovarian cancer is</p> <p>18 multifactorial, so all of those things could</p> <p>19 be a cause of her cancer.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. In your report, you state: Not</p> <p>22 everyone who has an inherited BRCA mutation</p> <p>23 gets ovarian cancer and not everyone who gets</p> <p>24 ovarian cancer has an inherited BRCA</p> <p>25 mutation.</p>	<p>1 Doctor?</p> <p>2 DR. THOMPSON: Yes.</p> <p>3 A. Yes. It says BRCA1 gene</p> <p>4 mutation.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. So you would like me to amend</p> <p>7 my statement.</p> <p>8 If you're a BRCA1 gene</p> <p>9 mutation, you have a 39 to 46% lifetime risk</p> <p>10 of developing ovarian cancer, correct?</p> <p>11 A. If a woman has, not -- you</p> <p>12 aren't that mutation. If you have the</p> <p>13 mutation.</p> <p>14 Q. All right. And if a woman has</p> <p>15 a BRCA2 gene mutation, she would have an 11</p> <p>16 to 27% increased lifetime risk of ovarian</p> <p>17 cancer; is that right?</p> <p>18 A. She would have an 11 to 27%</p> <p>19 lifetime risk of developing ovarian cancer,</p> <p>20 not increased lifetime risk, but a lifetime</p> <p>21 risk.</p> <p>22 Q. So if we have a woman who is</p> <p>23 BRCA-positive, she's at a 40% lifetime risk</p> <p>24 of ovarian cancer, and you consider BRCA to</p> <p>25 be a cause of her ovarian cancer; is that</p>

Judith Wolf, M.D.

	Page 526	Page 528
1	right?	1 There needs to be something more?
2	A. Yes. If she has ovarian	2 A. Yes.
3	cancer, yes.	3 DR. THOMPSON: Object to form.
4	Q. Is it your opinion that any	4 A. That is true.
5	individual woman who is BRCA-positive and who	5 BY MR. ZELLERS:
6	gets ovarian cancer, that you don't think the	6 Q. Talc -- are you of the view
7	BRCA mutation alone could have caused her	7 that talc increases a woman's risk of ovarian
8	ovarian cancer?	8 cancer by 20 to 30%?
9	DR. THOMPSON: Object to form.	9 A. 20 to 40%.
10	BY MR. ZELLERS:	10 Q. And you consider talcum powder
11	Q. Is that your testimony and	11 use to be a cause of ovarian cancer, correct?
12	opinion?	12 A. Yes.
13	DR. THOMPSON: Object to form.	13 Q. Similar to BRCA, it's your
14	A. The inherited gene mutation in	14 opinion that talc alone is not sufficient to
15	one allele of the BRCA gene alone does not	15 cause an individual woman's ovarian cancer,
16	cause cancer.	16 correct?
17	BY MR. ZELLERS:	17 A. Any risk factor alone that
18	Q. There has to be something else	18 causes only one hit to the cell would not
19	to cause the cancer, ovarian cancer, in this	19 cause ovarian cancer. My concern about talc
20	case, in your opinion; is that right?	20 is that continued use, long-term use could
21	DR. THOMPSON: Object to form.	21 cause more than one injury to the cell.
22	A. Yes, that is correct.	22 The BRCA mutation doesn't
23	BY MR. ZELLERS:	23 change over a woman's lifetime; it's that one
24	Q. If we go back to your analogy	24 mutation. But if you have a continuing
25	that you used in the Kleiner trial, BRCA gene	25 injury, then you could have more than one.
	Page 527	Page 529
1	mutation is just one of the Jenga pieces,	1 Q. Generally, is it your opinion
2	fair?	2 that in order for ovarian cancer to be
3	A. Yeah, one hit, one injury to	3 caused, it takes more than talcum powder use?
4	the cell.	4 DR. THOMPSON: Object to form.
5	Q. And we talked yesterday that	5 A. It takes more than one gene
6	you believe, and I think we looked at	6 mutation for a normal cell to become a
7	Dr. Clarke-Pearson, that it takes at least 10	7 cancerous cell. My opinion is that talc use
8	to 15 injuries or mutations to the cell?	8 could cause one, it could cause two, it could
9	A. The literature supports 5 to	9 cause more injuries to the cell, and that's
10	10.	10 going to vary from patient to patient based
11	Q. Does that mean that if a woman	11 on her underlying physiology and any other
12	is -- strike that.	12 risk factors that she may or may not have.
13	Does that mean that if a woman	13 BY MR. ZELLERS:
14	does have a BRCA gene mutation, that that	14 Q. So in your opinion, in some
15	increase in risk is not high enough to say	15 cases, talc use alone may not be sufficient
16	that BRCA alone caused the woman's ovarian	16 to cause an individual woman's ovarian
17	cancer?	17 cancer; it may require other things, other
18	DR. THOMPSON: Object to form.	18 risk factors?
19	A. I do not understand that	19 A. That is not what I said.
20	question.	20 MS. GARBER: That's not what
21	BY MR. ZELLERS:	21 she said at all.
22	Q. So whether it's a BRCA1 gene	22 MR. ZELLERS: Ms. Garber,
23	mutation or a BRCA2 gene mutation, that in	23 please. You can object to form --
24	and of itself, in your opinion, does not	24 MS. GARBER: Okay. Object to
25	cause a woman's cancer, ovarian cancer.	25 form.

Judith Wolf, M.D.

Page 530	Page 532
<p>1 MR. ZELLERS: -- but don't be 2 making comments and shouting out. 3 Okay. 4 MS. GARBER: Just a total 5 misrepresentation of what she said. I 6 just blurted it out. I apologize. 7 DR. THOMPSON: But you weren't 8 loud, comparatively speaking. 9 BY MR. ZELLERS: 10 Q. BRCA. 11 A. BRCA. 12 Q. Gene mutation. 13 A. Yes. 14 Q. And we know that it increases 15 or causes results in a lifetime risk -- 16 increased risk of -- depending upon the 17 mutation, of between 11% and 46%, correct? 18 A. So what that means is that if 19 you have a BRCA1 mutation, by the time you're 20 at age 70, there's around a 40% chance you 21 could have ovarian cancer. 22 If you have a BRCA2 mutation, 23 by the time you get to age 70, there's an 11 24 to 27%. 25 I just picked the middle number</p>	<p>1 need to cause either 5 to 10 hits to the cell 2 or 10 to 15, depending upon how many genetic 3 hits are required to the cells to cause 4 ovarian cancer. 5 Is that your opinion? 6 DR. THOMPSON: Object to form. 7 A. Whatever causes the cancer, 8 there has to be 5 to 10 injuries to the cell 9 that result in genetic changes in the cell 10 that can cause -- that cause cancer. 11 BY MR. ZELLERS: 12 Q. Those hits or injuries to the 13 cell could come from talcum powder use, they 14 could come from BRCA gene mutations, they 15 could come from hormone replacement therapy, 16 family history, age, obesity, correct? 17 A. So we know that BRCA mutations 18 is one of -- would be one of those hits, 19 right? Family history could indicate that 20 there's some genetic underlying hit. 21 Endometriosis, like talc, from inflammatory 22 changes could cause a hit or multiple hits. 23 Q. In Ms. Bondurant's case, is it 24 possible to identify how many other causes of 25 her ovarian cancer were at play other than,</p>
<p>1 Page 531 2 because I couldn't do the math fast enough in 3 my head. 4 Q. And, in your opinion, if a 5 woman uses talcum powder for a sufficient 6 amount of time, that woman has an increased 7 risk of ovarian cancer of somewhere between 8 20 and 40%, correct? 9 A. Yes. 10 Q. In an individual woman's case, 11 talcum powder use may alone be sufficient to 12 cause ovarian cancer, depending upon the 13 number of genetic mutations that are caused, 14 or the talcum powder use may require 15 additional risk factors in order to cause the 16 ovarian cancer. 17 Is that fair? 18 A. So the talcum powder use could 19 cause more than one genetic hit to the cell. 20 And each individual woman's background could 21 be different, and what -- her body's reaction 22 to the talcum powder -- so the talcum powder 23 alone can be a cause, and there may be some 24 other risk factor that she has or some other 25 cause. 25 Q. The talcum powder use would</p>	<p>1 Page 533 2 in your opinion, her talc use? 3 DR. THOMPSON: Object to form. 4 BY MR. ZELLERS: 5 Q. And if you don't understand 6 that question, I'll try to do better. 7 A. Can you try to do better? 8 Q. Sure. I will try. 9 A. You knew when the words were 10 coming out of your mouth, right? 11 Q. I can't promise. 12 Are there likely other causes 13 of Ms. Bondurant's clear-cell ovarian cancer, 14 in addition to talcum powder use, in your 15 opinion? 16 A. So in my review of her risk 17 factors and her protective factors, she did 18 have a family history that could increase her 19 risk, so that could also be a cause of her 20 cancer. 21 Q. Anything else? 22 A. I think the endometriosis 23 question is still not clear to me because we 24 don't have pathologic confirmation of 25 endometriosis. 25 Q. Anything else?</p>

Judith Wolf, M.D.

Page 534	Page 536
<p>1 A. I don't think there's anything 2 else in her history that I identified. 3 Smoking would be mucinous 4 cancer, and she did not have mucinous cancer. 5 Q. In Ms. Bondurant's case and in 6 any case, we have the possibility of factors 7 that are, as of now, unknown, correct? 8 That's true for any -- 9 A. All cancers, yeah. 10 Q. Okay. I asked you this 11 yesterday and I don't think we ever reached 12 an agreement, but new question. 13 In Ms. Bondurant's case, are 14 you able to ascribe a percentage that talc 15 caused her ovarian cancer as compared to a 16 percentage that family history caused her 17 ovarian cancer as compared to a percentage 18 that endometriosis caused her ovarian cancer? 19 DR. THOMPSON: Object to form. 20 A. I don't know how I would 21 ever -- I don't know how to answer that 22 question because I don't think of it as a 23 percentage. 24 Are you -- so I guess I'm still 25 not understanding your question.</p>	<p>1 their proportionate cause was of 2 Ms. Bondurant's ovarian cancer? 3 DR. THOMPSON: Object to form. 4 A. That is not something that 5 makes any clinical sense to me, so I'm not 6 sure what you're asking. And I would never 7 say, well, it's a 20% chance that this caused 8 it and a 20% that that caused it and a 20% 9 chance that that caused it. That sounds like 10 that's what you're asking me. 11 BY MR. ZELLERS: 12 Q. Well, let me try to do a little 13 better. And if you can't -- I just want to 14 know if that's an opinion that you either 15 have or may have. 16 Can you attribute or break down 17 among the different risk factors for ovarian 18 cancer, and in Ms. Bondurant's case, we've 19 got talc use, we've got family history and 20 possibly endometriosis. 21 And your opinion is that talc 22 use is a cause, family history may be a 23 cause, and endometriosis, if it was verified, 24 may be a cause, fair? 25 A. Yes.</p>
Page 535	Page 537
<p>1 BY MR. ZELLERS: 2 Q. I'm asking -- my job today is 3 to ask you your opinions. 4 A. Yes. 5 Q. So do I understand correctly 6 that, in your opinion, you cannot ascribe a 7 percentage cause of talc to Ms. Bondurant's 8 ovarian cancer or a percentage cause of 9 family history to her ovarian cancer or a 10 percentage cause that endometriosis caused 11 her ovarian cancer? 12 A. Are you asking me to rank what 13 I think the causes are? 14 Q. Well, here's what I'm asking 15 you to do. In Ms. Bondurant's case, she has 16 ovarian cancer. 17 A. Yes. 18 Q. Did talc contribute 20% to her 19 ovarian cancer? Did it contribute 60% to her 20 ovarian cancer? Similarly, did family 21 history contribute 20% to her ovarian cancer 22 or 40 or 60%? Did endometriosis contribute 23 20 or 30 or 40%? 24 Are you able to give an opinion 25 among the different risk factors as to what</p>	<p>1 Q. And I think you told me earlier 2 that your assumption, when you looked at 3 these cases, is: If there is an identifiable 4 risk factor, that it has some role in causing 5 the ovarian cancer, correct? 6 A. Yes. 7 Q. So among, in Ms. Bondurant's 8 case -- in Ms. Bondurant's case, among the 9 risk factors, are you able to say that you 10 think talc was 50% responsible for her 11 ovarian cancer and family history was 30% 12 responsible and endometriosis is 20% 13 responsible, or is that not something that 14 you think, you know, as an expert, that you 15 can ascribe percentages of the risk factors 16 to the cause of her cancer? 17 DR. THOMPSON: Object to form. 18 A. In an individual patient, I 19 would not assess percentage of cause from 20 different individual risk factors. 21 BY MR. ZELLERS: 22 Q. Go back to the -- is it the 23 Wentzensen article? That's the 2021 article 24 that we marked a bit ago that was written 25 with O'Brien as a coauthor.</p>

Judith Wolf, M.D.

Page 538	Page 540
<p>1 MS. GARBER: 47. 2 MR. ZELLERS: What's that? 3 MS. GARBER: 47. 4 MR. ZELLERS: Thank you. 5 THE WITNESS: 47? How did I 6 get so out of order. 7 BY MR. ZELLERS: 8 Q. It shouldn't be too far down 9 the stack. 10 A. There it is. It got to the 11 bottom somehow. 12 There we go. Got it. 13 Q. Go to page 9. 14 A. So this is in her conclusions, 15 or his conclusions? 16 Q. Right. 17 A. I guess he's a man. 18 Q. We'll assume Nicholas, yes. 19 A. We'll assume Nicholas. 20 Q. The authors state, in that 21 first paragraph on the left-hand side, which 22 is part of the conclusion: Independent of 23 the underlying cause, the association between 24 powder use and ovarian cancer risk is weak. 25 The low relative risk translate --</p>	<p>1 opinion. 2 Q. What is your opinion? 3 A. That in something that has no 4 clear medical benefit, that if it increases 5 the risk of a cancer, it should not be used. 6 And I would not call the association weak. 7 It's a rare disease and a 10%, 20%, 30% 8 increased risk is too much. 9 Q. Do you agree that there is a 10 very low absolute risk increase, given the 11 rarity of ovarian cancer? 12 A. I think I already answered that 13 question, and I do not agree with that 14 statement. 15 Q. Further down, the authors say: 16 Given the inability... 17 Do you see where I'm at? 18 A. Yes. 19 Q. Given the inability to 20 attribute a clear causal factor to the 21 observed associations, the lack of a good 22 experimental model, the lack of a specific 23 biomarker for powder-related carcinogenesis, 24 and the inability to rule out confounding by 25 indication, it is difficult to conclude that</p>
<p>1 A. Wait. Wait. I'm looking at 2 the conclusion. I thought you said the first 3 paragraph in the conclusion. 4 Q. I'm sorry. I'm on page 9, so, 5 no, it is the first paragraph on page 9 -- 6 A. Okay. 7 Q. -- which is a part of the 8 conclusion. 9 A. Okay. I gotcha now. 10 Q. All right. So first sentence: 11 Independent of the underlying cause, the 12 association between powder use and ovarian 13 cancer risk is weak. 14 Do you agree with that? 15 A. No. 16 Q. The authors go on to state: 17 The low relative risk translates to a very 18 low absolute risk increase, given the rarity 19 of ovarian cancer. 20 Do you believe that's true? 21 A. I believe that's their 22 conclusion. That's what they say. 23 Q. Do you agree or disagree or 24 don't have an opinion on that statement? 25 A. I have a slightly different</p>	<p>1 the observed associations are causal. 2 Do you agree with that? 3 A. There are some things in that 4 statement that I disagree with and there are 5 some that I agree with. 6 I do think there is evidence to 7 support a causal factor. I do agree there's 8 not a good experimental model. I talked 9 about that several times yesterday. I do 10 agree that there's a lack of a specific 11 biomarker. 12 I'm not sure what it means by 13 inability to rule out confounding by 14 indication, so I don't have an answer for -- 15 an opinion about that. 16 Q. Okay. 17 A. And I disagree with it's 18 difficult to conclude the observed 19 associations are causal. 20 Q. These authors in the paper we 21 just looked at discuss the inability, given 22 the body of epidemiology, to rule out the 23 possibility that an unknown confounder is 24 driving the relative risk we're seeing in 25 some of the case-controlled studies.</p>

Judith Wolf, M.D.

Page 542	Page 544
<p>1 Did you consider that in 2 forming your specific causation opinion 3 regarding Ms. Bondurant?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. So I'm going to step back and 6 say in reviewing all the epidemiologic 7 literature as a whole, if they were not so 8 consistent where 91% of them show a positive 9 association, that would be more concerning to 10 me, but that's not true.</p> <p>11 In Ms. Bondurant specifically, 12 all of the known risks or protective factors 13 I evaluated, and we talked about the ones 14 that she had and those that she did not have, 15 and so I guess what's the question about 16 Ms. Bondurant specifically?</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Whether or not you considered 19 the possibility and the inability to rule out 20 unknown confounders, you know, potential risk 21 factors or confounders that have not been 22 identified.</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. Well, I would never think about 25 a confounder necessarily in a patient.</p>	<p>1 chlamydia. We've known for a while that 2 chronic PID can increase the risk of ovarian 3 cancer. But as we've learned more about it, 4 we've learned that specifically chlamydial 5 PID infections, which are the most common 6 cause of PID, increase the risk of ovarian 7 cancer.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. You said a moment ago or talked 10 about the epidemiologic studies and said 91% 11 were -- showed a positive association. Let 12 me just clarify.</p> <p>13 Some of those that show a 14 positive association are statistically 15 significant and some are not, fair?</p> <p>16 A. Some of them the confidence 17 interval crosses 1 and some of them -- more 18 than half of them it does not.</p> <p>19 Q. In terms of a confounder -- I'm 20 not sure we're on the same page, but let me 21 use an example.</p> <p>22 So if you're studying an 23 association between coffee and pancreatic 24 cancer, you need to consider whether 25 cigarette smoking is more common in coffee</p>
<p>1 Unknown risk factors, that's -- that could be 2 a possibility.</p> <p>3 The risk factor -- we talked 4 about this yesterday. The risk factors for 5 ovarian cancer have been pretty stable for a 6 long time, for the last 30 or 40 years.</p> <p>7 Obesity has become more clear recently only 8 because obesity is so much more common and we 9 can study it better.</p> <p>10 Q. Is it your testimony that risk 11 factors for ovarian cancer -- strike that.</p> <p>12 Is it your testimony that new 13 risk factors for ovarian cancer have not been 14 identified in the last 20 to 30 years?</p> <p>15 DR. THOMPSON: Object to form.</p> <p>16 A. My testimony is that most of 17 the risk factors for ovarian cancer have been 18 known about or suspected and refined somewhat 19 over the last 30 or 40 years.</p> <p>20 We knew in the '80s that family 21 history was a risk factor. It wasn't until 22 we had the human genome project and were able 23 to identify what those family risk factors 24 might be, an inherited genetic mutation.</p> <p>25 We talked yesterday about</p>	<p>1 drinkers than in the rest of the population, 2 right, if that's what you were studying?</p> <p>3 A. To look for other potential 4 risk factors, yes.</p> <p>5 Q. Right. So --</p> <p>6 A. Yes.</p> <p>7 Q. So in my -- well, it's not 8 really a hypothetical. I guess it's an 9 analogy.</p> <p>10 There may be an association 11 between coffee and pancreatic cancer, but one 12 of the things a scientist or medical 13 professional would want to look at is whether 14 there's a confounder, there's something about 15 that coffee group that makes them more 16 susceptible to pancreatic cancer, such as 17 cigarette smoking. Fair?</p> <p>18 A. Fair.</p> <p>19 Q. So in that example, cigarette 20 smoking could be a confounder, because if 21 more coffee drinkers are smokers than 22 non-coffee drinkers, the association may be 23 between smoking and pancreatic cancer and 24 not, you know, between coffee drinking and 25 pancreatic cancer.</p>

30 (Pages 542 to 545)

Judith Wolf, M.D.

Page 546	Page 548
<p>1 DR. THOMPSON: Object to form. 2 BY MR. ZELLERS: 3 Q. It may be the smoking that's 4 driving that association. 5 DR. THOMPSON: Object to form. 6 A. Or it could be both. So you 7 would want to assess that in doing a 8 univariate analysis, looking at each 9 individual factor on its own, and a 10 multivariate analysis where you look at the 11 contraindication of all of them to see if one 12 of them still statistically significant in 13 that case. 14 BY MR. ZELLERS: 15 Q. In our case, your opinion is 16 you don't believe that there is an unknown 17 confounder with talcum powder use as it 18 relates to an association with ovarian 19 cancer? 20 A. I don't believe anything has 21 been identified since the first publication 22 in the '80s that there's something else 23 that's associated with this that's causing 24 ovarian cancer. 25 And what I mean is talcum</p>	<p>1 ovarian cancer, correct? 2 A. Yes. 3 Q. And you acknowledge in any 4 woman's case it's possible that their ovarian 5 cancer is caused by an unknown or 6 undiscovered cause, but you believe in 7 Ms. Bondurant's case the likely cause is her 8 talcum powder use? 9 DR. THOMPSON: Object to form. 10 A. That a cause of her cancer is 11 talcum powder use. 12 BY MR. ZELLERS: 13 Q. The route of talcum powder 14 exposure in Ms. Bondurant's case was through 15 migration, correct? 16 A. Yes. 17 Q. You believe that her ovarian 18 cancer was caused from talcum powder 19 traveling to her ovary -- well, strike that. 20 We talked yesterday about 21 inhalation with Ms. Gallardo. Same question 22 with Ms. Bondurant. 23 Do you believe that her ovarian 24 cancer was caused from talcum powder 25 traveling to her ovaries through inhalation?</p>
<p>1 powder use has not been found to be 2 associated with a confounder in the 40 years 3 since -- nearly 40 years since it's been 4 found to be associated with ovarian cancer. 5 Q. All right. It's possible, but 6 in your opinion unlikely, that Ms. Bondurant 7 could have gotten her ovarian cancer because 8 of a cause that science has yet to discover. 9 Is that a good summary of your 10 opinion -- 11 DR. THOMPSON: Object to form. 12 BY MR. ZELLERS: 13 Q. -- on that point? 14 A. No. On the point of 15 confounding, my point is that as long as 16 we've known of the association between 17 genital powder use and ovarian cancer, there 18 have not been found any confounders that 19 would be the cause versus the genital talcum 20 powder use. 21 Q. And I'm going to step beyond 22 that. 23 A. Okay. 24 Q. We've acknowledged and we've 25 discussed that there may be unknown causes of</p>	<p>1 A. I -- my assessment is that it's 2 from her genital talcum powder use and 3 migration. Inhalation could be a part of 4 that. 5 Q. You've not attempted or made 6 any determination of how much talc 7 Ms. Bondurant was exposed to over the period 8 of time she used talcum powder; is that 9 right? 10 DR. THOMPSON: Object to form. 11 A. So because what I have on her 12 talcum powder use, it says from infancy to 13 2015, baby powder, and Shower To Shower 14 from '70 to '80. There's no correlation 15 between infant use of powder and cancer, as 16 far as I'm aware. And so assuming that she 17 went through menarche around the time of 12, 18 which would be a little older than average, 19 but we'll say 12, and she used it three to 20 five times a week until 2015, but I know she 21 had her tubes tied in 1987 -- I'm doing a lot 22 of math here -- I think it was something like 23 16 years, 15 years of use, and I multiplied 24 that by four if she used it three to five 25 times a week, and it was something like 5600</p>

Judith Wolf, M.D.

Page 550	Page 552
<p>1 times that she used it, to try to get an 2 assessment of how much she used. 3 BY MR. ZELLERS: 4 Q. And in your view, that amount 5 of usage would be a sufficient amount of 6 talcum powder to, in your opinion, be a cause 7 of her ovarian cancer, correct? 8 A. Certainly that's supported in 9 the epidemiologic literature where they 10 looked at -- 11 Q. We talked yesterday -- 12 A. -- women with that much use. 13 (Simultaneous discussion 14 interrupted by the stenographer.) 15 A. Where they assessed that -- the 16 amount of use. I don't remember my exact 17 words, but that seems about right. 18 BY MR. ZELLERS: 19 Q. I believe I understand your 20 opinion to be that in a given case, there may 21 be an insufficient amount of talcum powder 22 use for you to conclude that the talcum 23 powder use is a cause of ovarian cancer, but 24 here there's sufficient use; is that right? 25 A. So it's not just amount of use.</p>	<p>1 come up with or develop a case-specific 2 opinion, whether a woman alleges that she put 3 the talcum powder on their underwear or if 4 they put it on pads or if they actually put 5 it on their body? Does any of that matter to 6 you in terms of case-specific opinions? 7 DR. THOMPSON: Object to form. 8 A. You mean put it on their 9 genital area as -- directly on their body? 10 BY MR. ZELLERS: 11 Q. Yes, as opposed to putting it 12 on pads or putting it in their underwear. 13 A. Not specifically. 14 Q. All of those, if there was 15 sufficient duration, would be the types of 16 use that you believe could cause or result in 17 the migration of the talcum powder to the 18 fallopian tubes and the ovaries; is that 19 right? 20 A. So all of those ways -- and I 21 don't -- I wouldn't say it's duration 22 specifically, because some of it is also the 23 individual patient's reactions to the talc, 24 the body's reaction to it. Duration is part 25 of that.</p>
<p>1 It's -- it's the tract open. If somebody 2 got their tubes tied at 21 and started using 3 talcum powder daily at 28, that would be hard 4 for me to make an assessment of use. 5 If somebody used talcum powder 6 once in their entire life, that would be a 7 challenge. 8 Q. And I think we talked yesterday 9 that you've looked at some cases and have 10 determined there's not enough evidence that 11 talcum powder caused ovarian cancer, and 12 those would be examples of cases, you know, 13 hypothetical examples -- 14 A. Hypothetical. 15 Q. -- yes, in which you would not 16 think there was sufficient use for talcum 17 powder to be a cause, correct? 18 A. That's correct. 19 Q. So while you, you know, don't 20 have a precise estimate of the amount of 21 talcum powder exposure that Ms. Bondurant 22 had, in your view, she had sufficient 23 exposure? 24 A. Yes. 25 Q. Does it matter to you, when you</p>	<p>1 Q. So in your opinion, the science 2 equally supports the ability of talc applied 3 externally to the underwear to travel to the 4 ovaries as it does talc applied to the 5 perineum to travel to the ovaries, fair? 6 A. So some of the studies looked 7 at those specific questions and others did 8 not. It's my opinion that generally all of 9 those would have the same access. 10 Q. We talked yesterday about the 11 potential for bias of a woman who's making a 12 claim, you know, in a case that talcum powder 13 use caused ovarian cancer. 14 I believe your methodology and 15 the way you approach these cases is to assume 16 that any of the women who used talcum powder, 17 to believe their use; is that right? 18 DR. THOMPSON: Object to form. 19 A. Yes, generally. If they're 20 deposed, it's under oath, I would assume 21 they're telling the truth. 22 BY MR. ZELLERS: 23 Q. You do not consider that there 24 may be a bias because a particular patient or 25 plaintiff has brought a lawsuit? I mean,</p>

Judith Wolf, M.D.

Page 554	Page 556
<p>1 you -- you don't consider that, correct?</p> <p>2 A. I would assume that if they</p> <p>3 were under oath, that their bias would be</p> <p>4 negated. I wouldn't lie about something</p> <p>5 under oath to try to get what I wanted.</p> <p>6 Q. In your report you describe the</p> <p>7 inflammatory properties of talc when</p> <p>8 introduced into the peritoneal cavity.</p> <p>9 That's your report, page 5.</p> <p>10 A. Uh-huh.</p> <p>11 Q. And that J&J submitted a patent</p> <p>12 for nonirritating starch-based dusting powder</p> <p>13 due to the severe postoperative complications</p> <p>14 and strong inflammatory reaction.</p> <p>15 Did I reference that correctly</p> <p>16 from page 5 of your report?</p> <p>17 A. I'm looking at page 5.</p> <p>18 Q. Sure.</p> <p>19 A. In 1998, Janssen, a subsidiary</p> <p>20 of Johnson & Johnson, changed -- oh, that's</p> <p>21 the diaphragm part.</p> <p>22 In 1953, Johnson & Johnson</p> <p>23 submitted a patent application for a</p> <p>24 nonirritating starch-based dusting powder due</p> <p>25 to severe postoperative complications and</p>	<p>1 Q. Pelvic inflammatory disease</p> <p>2 would be painful; is that right?</p> <p>3 A. Well, acute pelvic inflammatory</p> <p>4 disease is painful. Chronic inflammatory</p> <p>5 disease may or may not be painful.</p> <p>6 Q. Talc and the way talc operates,</p> <p>7 in your view, it induces chronic</p> <p>8 inflammation, correct?</p> <p>9 A. Yes.</p> <p>10 Q. In your view, that's a</p> <p>11 completely silent-type activity, correct?</p> <p>12 And by silent, I mean it doesn't cause pain;</p> <p>13 it is -- it's not something that a patient</p> <p>14 would be aware of?</p> <p>15 A. Generally not.</p> <p>16 Q. And that's why ovarian cancer</p> <p>17 is diagnosed so late; is that right?</p> <p>18 DR. THOMPSON: Object to form.</p> <p>19 A. No, those two things are</p> <p>20 separate. Ovarian cancer is diagnosed late</p> <p>21 because the symptoms of ovarian cancer are</p> <p>22 subtle and they're symptoms that are common</p> <p>23 among other things. It has nothing to do</p> <p>24 with inflammation.</p> <p>25 ///</p>
<p style="text-align: center;">Page 555</p> <p>1 strong inflammatory reactions frequently</p> <p>2 caused by talc.</p> <p>3 Yes.</p> <p>4 Q. Do you think that the strong</p> <p>5 inflammatory reaction took place in</p> <p>6 Ms. Bondurant for decades with no symptoms?</p> <p>7 A. Chronic inflammation can have</p> <p>8 no symptoms. It's a local cellular reaction</p> <p>9 that causes cancer, not a systemic reaction.</p> <p>10 Q. Is that generally how chronic</p> <p>11 inflammation operates in the human body?</p> <p>12 A. Depends on what the chronic</p> <p>13 inflammation is causing. And it can -- when</p> <p>14 we think about cancer specifically and</p> <p>15 inflammation as a cause, generally cancer is</p> <p>16 not a painful process. It's a change at the</p> <p>17 cellular level that changes the cells there,</p> <p>18 does not cause a systemic inflammatory</p> <p>19 reaction. It's happening right there at the</p> <p>20 cell.</p> <p>21 Q. In your view, can chronic</p> <p>22 inflammation cause pain at times?</p> <p>23 A. Chronic inflammation for some</p> <p>24 diseases causes pain, such as rheumatoid</p> <p>25 arthritis.</p>	<p style="text-align: center;">Page 557</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Well, if the inflammation was</p> <p>3 of a type that caused pain or discomfort to a</p> <p>4 patient, then that might result in her</p> <p>5 ovarian cancer being diagnosed earlier,</p> <p>6 correct?</p> <p>7 MS. GARBER: Object to the</p> <p>8 form.</p> <p>9 A. That's a lot of hypotheticals,</p> <p>10 but possibly.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. Right. I mean, one of the</p> <p>13 factors, at least in your view, as to why</p> <p>14 ovarian cancer is diagnosed late is because</p> <p>15 if there is a chronic inflammatory process</p> <p>16 that's ongoing that's causing and/or</p> <p>17 contributing to the ovarian cancer, it's not</p> <p>18 causing pain, correct?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. It's not causing discomfort to</p> <p>22 the patient?</p> <p>23 A. So the beginning of that</p> <p>24 question, I thought you were asking why do I</p> <p>25 think ovarian cancer is found late. And I</p>

Judith Wolf, M.D.

Page 558	Page 560
<p>1 think ovarian cancer is found late because 2 the symptoms are nonspecific and they happen 3 in women who have -- more commonly have those 4 symptoms from a different diagnosis, and 5 cancer generally does not cause pain.</p> <p>6 Do I think that the chronic 7 inflammatory response that talc and 8 endometriosis and incessant ovulation and a 9 lot of other things can cause -- that can 10 cause ovarian cancer can cause pain? No. 11 Those two things I think about separately.</p> <p>12 Q. Surgical gloves and talc on 13 surgical gloves can cause a strong 14 inflammatory reaction; is that right?</p> <p>15 MS. GARBER: Object to the 16 form.</p> <p>17 A. An acute inflammatory reaction.</p> <p>18 MR. ZELLERS: Ms. Garber, did 19 you say something?</p> <p>20 MS. GARBER: I said object to 21 the form.</p> <p>22 MR. ZELLERS: Okay. And, I'm 23 sorry, could you read the witness' 24 answer to me again? Sorry.</p> <p>25 -----</p>	<p>1 the substances that they secrete that cause 2 the oxidative stress. If they're localized 3 or if they are systemic, things like 4 interleukins and growth factors and other 5 cytokines that cells release.</p> <p>6 Q. We discussed yesterday that 7 it's your opinion that the talcum powder 8 causes, in this case, Ms. Bondurant's ovarian 9 cancer, correct?</p> <p>10 A. So we didn't talk about 11 Ms. Bondurant yesterday.</p> <p>12 Q. I understand, and so let me 13 ask -- or try to ask a better question. I'm 14 trying to generalize this.</p> <p>15 You're not saying in 16 Ms. Bondurant's case that her ovarian cancer 17 was caused by asbestos or by heavy metals. I 18 mean, those are not opinions -- specific 19 opinions that you have, correct?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. So my opinion is it's her 22 talcum powder use, which has been shown to 23 have platy talc, fibrous talc, asbestos, 24 heavy metals, caused her cancer.</p> <p>25 ///</p>
<p style="text-align: center;">Page 559</p> <p>1 (The following portion of the 2 record was read.)</p> <p>3 ANSWER: An acute inflammatory 4 reaction.</p> <p>5 (End of readback.)</p> <p>6 -----</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. So does an acute inflammatory 9 reaction generally cause pain?</p> <p>10 A. It can.</p> <p>11 Q. And I guess similarly a chronic 12 inflammation may or may not cause pain, 13 correct?</p> <p>14 A. Depending on the site and the 15 level of the inflammation, whether it's 16 systemic or cellular.</p> <p>17 Q. Does science understand or can 18 science explain why some chronic inflammation 19 is painful and other chronic inflammation is 20 not?</p> <p>21 A. Some of it is because of the 22 substances that cause the -- the substances 23 released by the cells, in this case, the 24 ovarian cells themselves or any inflammatory 25 cells, macrophages around the ovarian cells,</p>	<p style="text-align: center;">Page 561</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. It's a combination of talc, 3 whatever is in the talc --</p> <p>4 A. It's whatever is in the talc.</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. -- that you believe, in 8 Ms. Bondurant's case and in all of the cases 9 that you have reviewed, caused or is a cause 10 of ovarian cancer, correct?</p> <p>11 DR. THOMPSON: Object to form.</p> <p>12 A. So it's the talc use, which can 13 have any or all of those substances in it, 14 that causes it.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. The talc may or may not have 17 trace amounts of asbestos. It may have, you 18 know, the amounts of heavy metals that are 19 contained in the talc. But it's the talc 20 itself that causes or is a cause of ovarian 21 cancer, in your view, correct?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 MS. GARBER: Object to the 24 form.</p> <p>25 A. It's the talc itself. And in</p>

Judith Wolf, M.D.

Page 562	Page 564
<p>1 some cases, like Ms. Gallardo that we talked 2 about yesterday, we found that there was 3 evidence of talc fibers and asbestos fibers 4 in her cancer.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Well, do we know if those were 7 asbestos fibers -- and let me withdraw, lay a 8 little foundation here.</p> <p>9 We established yesterday you're 10 not a geologist, correct?</p> <p>11 A. I'm not.</p> <p>12 Q. You're not an expert in 13 asbestos, correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. I would say I'm an expert in 16 the health effects, in gynecologic health of 17 women and asbestos.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. Are you aware that tremolite 20 fibers, which I believe Dr. Godleski found, 21 or particles -- we'd have to go back and look 22 at the report to see -- can either be 23 asbestosiform or nonasbestosiform?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. So tremolite fibers are</p>	<p>1 A. I would defer to IARC 2012 that 2 defined tremolite as asbestos.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. In terms of whether a 5 particular mineral is or is not asbestos, 6 would you defer to a geologist?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 MS. GARBER: Object to the 9 form.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. Or a mineralogist?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. I mean, I'm deferring to IARC 14 for what is asbestos, and they list the types 15 of asbestos and tremolite is one of those.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. So you would not defer to a 18 geologist or to a mineralogist as to whether 19 a particular mineral is asbestos or not?</p> <p>20 DR. THOMPSON: Object to form, 21 asked and answered.</p> <p>22 A. As to whether or not tremolite 23 is asbestos? I have no reason to think that 24 IARC 2012 is wrong when they say that 25 tremolite is asbestos.</p>
<p style="text-align: center;">Page 563</p> <p>1 considered asbestos. That's in the IARC 2 2012.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. So in your view, all tremolite 5 is asbestos; that there are no nonasbestos 6 forms of tremolite?</p> <p>7 MS. GARBER: Object to the 8 form.</p> <p>9 A. As far as I'm aware, tremolite 10 is considered asbestos.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. All right. So you're making an 13 assumption that anytime you hear or see the 14 word "tremolite," that it's asbestos, 15 correct?</p> <p>16 A. I'd have to look at 17 Dr. Godleski's report about the particles or 18 fibers, but if I saw tremolite fibers, I 19 would consider that asbestos.</p> <p>20 Q. My question again is: In terms 21 of the types of asbestos and whether there's 22 minerals that can be both asbestos and 23 nonasbestos but called the same name, you 24 would defer to a geologist on that, correct?</p> <p>25 DR. THOMPSON: Object to form.</p>	<p style="text-align: center;">Page 565</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. To get where I think I need to 3 get, you are not going to come in and talk to 4 the jury specifically about the 5 carcinogenicity of asbestos or the 6 carcinogenicity of heavy metals.</p> <p>7 What you're going to talk to 8 the jury and give opinions on is the 9 carcinogenicity of talcum powder, which may 10 or may not have trace amounts of asbestos, 11 which, you know, does have trace amounts of 12 heavy metals -- you're going to talk about 13 the carcinogenicity of the talc with whatever 14 is in the talc; is that fair?</p> <p>15 MS. GARBER: Object to the 16 form.</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 A. So the -- in explaining the 19 carcinogenicity of the talc, I would talk 20 about all of the things in the talc that can 21 be carcinogenic or are carcinogenic, and the 22 ways that those things can cause cancer.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. Did you do any investigation in 25 Ms. Bondurant's case as to whether or not she</p>

Judith Wolf, M.D.

Page 566	Page 568
<p>1 had been exposed to asbestos over the course 2 of her lifetime?</p> <p>3 A. So I believe all that I had in 4 Ms. Bondurant's case is her daughter's 5 deposition to know what her life was like, 6 and I don't remember -- recall the details of 7 that, but I'm -- it's whatever is in there. 8 I didn't know how else could I find out was 9 she -- did she work in asbestos. I don't 10 believe that she did or have any reason to 11 think that she was exposed to asbestos.</p> <p>12 Q. Do you have an opinion as to 13 whether or not asbestos exposure can cause 14 clear-cell ovarian cancer?</p> <p>15 A. So asbestos is carcinogenic, 16 again, referring back to IARC '12, and can 17 cause ovarian cancer.</p> <p>18 I don't know that -- and I'd 19 have to look at the details again. I don't 20 know that they looked specifically at the 21 cell types in that. I know that they ruled 22 out mesothelioma as the cancer in some of the 23 cases and were able to say that it was 24 epithelial ovarian cancer, but I don't 25 remember the details about the subtypes.</p>	<p>1 were similar to most of the bottles that he 2 tested from the '60s to 2000s, I would assume 3 that one or both of those was in at least 4 some of them.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. As far as you know, we have no 7 samples of any of the bottles of talc that 8 Ms. Bondurant used, correct?</p> <p>9 A. As far as I know, we don't. 10 And I would not expect that we would.</p> <p>11 Q. Do you have any opinions in 12 this case that it was a particular heavy 13 metal or a particular fragrance compound of 14 baby powder that was the cause of 15 Ms. Bondurant's ovarian cancer?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. It's my opinion it's the talcum 18 powder use.</p> <p>19 BY MR. ZELLERS:</p> <p>20 Q. Do you think the inflammatory 21 mechanism for heavy metals and/or fragrances 22 is the same as talc?</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. I think it could be the same or 25 they could act in concert, if they're all in</p>
<p>1 Q. Is it your opinion that 2 Ms. Bondurant's clear-cell ovarian cancer was 3 caused by heavy metals?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. It's my opinion that her 6 ovarian cancer was caused by her talc use.</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. You're not offering an opinion 9 as it relates to Ms. Bondurant -- well, let 10 me strike that.</p> <p>11 You have no evidence one way or 12 the other as to if there was asbestos 13 contamination in any of the bottles of talcum 14 powder used -- that Ms. Bondurant used; is 15 that right?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. I'm not aware that there was 18 any of the bottles that she used that were 19 available for analysis. What I know of from 20 Dr. Rigler's report is that in the Johnson & 21 Johnson baby powders that he analyzed, his 22 lab analyzed, two-thirds of them had evidence 23 of asbestos, and I think 54 out of 55 had 24 talc fibers.</p> <p>25 So if the bottles that she used</p>	<p>1 the same product.</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. Well, do you know whether or 4 not the inflammatory mechanism for heavy 5 metals and fragrances is the same as you 6 believe it is for talc?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. I think it could be the same or 9 it could be slightly different.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. Do you know the fragrance 12 ingredients for cornstarch baby powder?</p> <p>13 A. I don't.</p> <p>14 Q. Do you know if the fragrance 15 ingredients for cornstarch baby powder are 16 the same as they are for talc-based baby 17 powder?</p> <p>18 A. I don't.</p> <p>19 Q. Do you believe that the 20 etiology for clear-cell carcinoma is the same 21 as the etiology for high-grade serous 22 carcinoma?</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. So we talked about this 25 earlier, that the common genetic</p>

Judith Wolf, M.D.

Page 570	Page 572
<p>1 abnormalities that are seen in the different 2 subtypes of epithelial ovarian cancer, 3 high-grade serous, low-grade serous, 4 clear-cell being some of those, the common 5 genetic mutations are different. Some of 6 them are different, anyway.</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. But did you make a 9 determination about when it was that 10 Ms. Bondurant's clear-cell carcinoma began to 11 develop?</p> <p>12 A. No. That's a question I get 13 asked all the time and I don't have a good 14 answer for how long -- the cancer from the 15 time it starts until it grows. Cancers do 16 tend to grow in a logarithmic manner, and so 17 once it starts growing and becomes grossly 18 visible, it seems like it's growing fast. 19 But from the -- from when it starts until -- 20 until it becomes a cancer, generally people 21 say one to two years, but I'm not aware of 22 good evidence to support that.</p> <p>23 What I tell patients is once we 24 know it's there, we don't sit on it and do 25 nothing about it, unless there isn't anything</p>	<p>1 Q. The latency period you believe 2 is 15 to 20 years?</p> <p>3 A. For ovarian cancer, and for 4 most cancers. And a lot of that data comes 5 from the atomic bombs that were dropped in 6 Japan in World War II and the survivors and 7 the time it took for them to get cancer.</p> <p>8 Q. Do you believe that in any 9 individual, in like Ms. Bondurant, for 10 example, that you should discount the 11 previous 10 years before her diagnosis as not 12 contributing to the development of ovarian 13 cancer?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. Generally, I would not, because 16 it's continued injuries that could continue 17 to cause mutations.</p> <p>18 In Ms. Bondurant specifically, 19 she had her tubes tied in '87 and her cancer 20 was diagnosed in 2018, so...</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. All right. So you would not 23 consider any talcum powder use between 1987 24 and 2018, you know, as causing or 25 contributing to her ovarian cancer, correct?</p>
<p style="text-align: center;">Page 571</p> <p>1 we can do about it.</p> <p>2 Q. I think I saw in your earlier 3 testimony that you believe the latency period 4 from ovarian cancer can be anywhere from 15 5 to 20 years; is that right?</p> <p>6 A. Yes.</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. That's a different question, 9 though. That's how long does an exposure 10 that can be carcinogenic, how long does that 11 take until the cancer is there?</p> <p>12 I think that's a different 13 question than you asked me before.</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. And that would be -- what you 16 just described would be the latency --</p> <p>17 A. No. What I described is once 18 there's a cancer, how long has it been there 19 until it's found? That's what I was 20 describing.</p> <p>21 Q. And you believe that would be 22 the latency period?</p> <p>23 A. No, the latency period is the 24 time of the exposure until the cell becomes 25 cancerous.</p>	<p style="text-align: center;">Page 573</p> <p>1 DR. THOMPSON: Object to form.</p> <p>2 A. So I believe that the important 3 part of her use was prior to her tubes being 4 tied.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Prior to 1987?</p> <p>7 A. Yes.</p> <p>8 Q. Okay. You were not one of 9 Ms. Bondurant's treating physicians, correct?</p> <p>10 A. No, I was not.</p> <p>11 Q. You were not involved in any 12 diagnosis or treatment of her ovarian cancer; 13 is that right?</p> <p>14 A. No, I was not.</p> <p>15 Q. Ms. Bondurant passed away in 16 October of 2020.</p> <p>17 Did you ever have an 18 opportunity to meet her?</p> <p>19 A. I did not.</p> <p>20 Q. Have you ever spoken with her 21 husband?</p> <p>22 A. No.</p> <p>23 Q. Her children?</p> <p>24 A. No.</p> <p>25 Q. Did you ever make a request to</p>

Judith Wolf, M.D.

Page 574	Page 576
<p>1 the attorneys if you could meet with or speak 2 with Ms. Bondurant's family?</p> <p>3 A. No.</p> <p>4 Q. Have you ever spoken with any 5 of Ms. Bondurant's treating physicians about 6 her case?</p> <p>7 A. No.</p> <p>8 Q. Page 30 of your amended report, 9 and I think this will be on your materials 10 list, these are the case-specific materials 11 that you reviewed; is that right?</p> <p>12 It's not a number, but it comes 13 right after page 29.</p> <p>14 A. Yes.</p> <p>15 Q. So there are a lot of records 16 here; is that right?</p> <p>17 A. Yes.</p> <p>18 Q. Did you look at each of the 19 medical records?</p> <p>20 A. I did.</p> <p>21 Q. I assume that the medical 22 records and that all of these materials were 23 provided to you by counsel; is that right?</p> <p>24 A. Yes.</p> <p>25 MR. ZELLERS: I have no more</p>	<p>1 deposition; is that right?</p> <p>2 A. Yes.</p> <p>3 Q. Are the case-specific opinions 4 that you expect to provide at any trial or 5 hearing in the Judkins matter set forth on 6 pages 21 to 23 of the report, Deposition 7 Exhibit 8?</p> <p>8 A. Yes.</p> <p>9 Q. It's your opinion that talcum 10 powder was a cause of Ms. Judkins' cancer; is 11 that right?</p> <p>12 A. That's correct.</p> <p>13 Q. If Ms. Judkins had never used 14 talcum powder, she never would have gotten 15 ovarian cancer; is that what you're saying?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. What I'm saying is that 18 Ms. Judkins used talcum powder and she got 19 ovarian cancer, and that is the only risk 20 factor that I could find in her history. And 21 she used it daily for 46 years.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. You're not saying that if she 24 had never used talc, she never would have 25 gotten ovarian cancer, are you?</p>
<p style="text-align: center;">Page 575</p> <p>1 questions on Bondurant. We've got two 2 other cases. You want to take a lunch 3 break and then come back and do those? 4 They will be shorter --</p> <p>5 Let's go off the record.</p> <p>6 (Recess taken, 11:43 a.m. to 7 1:02 p.m. CDT)</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. Dr. Wolf, are you ready to 10 continue?</p> <p>11 A. I am.</p> <p>12 Q. The third case that you have 13 issued case-specific opinions in is 14 Ms. Judkins' case; is that right?</p> <p>15 A. That's correct.</p> <p>16 Q. Your case-specific -- well, 17 withdraw that.</p> <p>18 You have in front of you your 19 case-specific report in the Judkins case that 20 we've marked as Deposition Exhibit 8; is that 21 right?</p> <p>22 A. Yes.</p> <p>23 Q. The first 21 pages of this 24 report is the same as the general amended 25 report that we have discussed earlier in this</p>	<p style="text-align: center;">Page 577</p> <p>1 DR. THOMPSON: Object to form.</p> <p>2 A. What I'm saying is some women 3 who get ovarian cancer have never used talc, 4 and in Ms. Judkins' case, she got ovarian 5 cancer and she used talc.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. Ms. Judkins was 60 years old at 8 her diagnosis?</p> <p>9 A. Yes.</p> <p>10 Q. Could Ms. Judkins' age -- well, 11 let me withdraw that.</p> <p>12 Was Ms. Judkins' age a risk 13 factor for ovarian cancer?</p> <p>14 A. Advancing age can always be a 15 risk factor. She is slightly younger than 16 the average age, so I wouldn't separate it 17 out in her case as a risk factor.</p> <p>18 I think I talked yesterday 19 about an example of ninety -- I've had women 20 in their nineties, and then I would 21 definitely call age a risk factor.</p> <p>22 Q. Age generally does increase a 23 woman's risk for mutations, correct?</p> <p>24 A. Age increases anyone's risk for 25 mutations.</p>

Judith Wolf, M.D.

Page 578	Page 580
<p>1 Q. It's your opinion that a 2 60-year old woman, that that is not old 3 enough to be considered a risk factor for 4 ovarian cancer?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. I would say that age 60, likely 7 anyone who's lived to 60 years has had some 8 mutations. In ovarian cancer specifically, 9 60 I don't consider a risk factor, that age 10 60 as a risk factor.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. All right. Ms. Judkins at 13 60 years old may have had mutations related 14 to age, but in your view, the mutations, or 15 at least some of the mutations that resulted 16 in her ovarian cancer, were from her talcum 17 powder use?</p> <p>18 A. Some of the injuries to her 19 cells that led to cancer, yes.</p> <p>20 Q. Did Ms. Judkins have a family 21 history of cancer?</p> <p>22 And I can show you the 23 plaintiff profile form, if need be.</p> <p>24 A. Yes. She had a maternal uncle 25 with kidney cancer and a paternal great aunt</p>	<p>1 through inhalation?</p> <p>2 A. I can't disprove that. She 3 applied it to her genital area. I think that 4 would be the most risk for her exposure.</p> <p>5 Q. You do not intend to go in -- 6 strike that.</p> <p>7 You do not intend to testify at 8 trial that her route of exposure was 9 inhalation. Your testimony will be that her 10 most likely route of exposure was through the 11 genital tract. Correct?</p> <p>12 DR. THOMPSON: Object to form.</p> <p>13 A. I believe her most likely route 14 of exposure was through her genital tract.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. Just a general question. You 17 can look at page 12 or 13 of your report 18 here, but one of the articles that you're now 19 citing is the Psooy article.</p> <p>20 Are you familiar with that, 21 P-S-O-O-Y?</p> <p>22 A. Yes.</p> <p>23 Q. And in that article, that 24 article demonstrated that bath water can 25 become entrapped in the vagina in females</p>
<p>1 with breast cancer.</p> <p>2 Q. That family history would be a 3 risk factor for the development of ovarian 4 cancer, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. No. No. One -- I guess a 7 paternal great aunt would. A third-degree 8 relative with breast cancer would not. And 9 the kidney cancer on her mother's side would 10 not be related to her -- a risk of ovarian 11 cancer.</p> <p>12 BY MR. ZELLERS:</p> <p>13 Q. Could Ms. Judkins' family 14 history of cancer have played a role in her 15 development of ovarian cancer?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 A. It's unlikely.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. You believe that the route of 20 exposure in Ms. Judkins' case was through 21 migration?</p> <p>22 A. Yes.</p> <p>23 Q. Do you believe that 24 Ms. Judkins' ovarian cancer was caused from 25 talcum powder traveling to her ovaries</p>	<p>1 with normal anatomy.</p> <p>2 Is that what you cite it for?</p> <p>3 A. Yes.</p> <p>4 Q. Would you agree it would be a 5 rare occurrence for a woman to have water 6 trapped in her vagina?</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. It depends on how long it would 9 be in her vagina, and I don't have an answer 10 to that.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. Well, if there's an open 13 system -- and you believe there is an open 14 system, correct?</p> <p>15 A. Yes.</p> <p>16 Q. Why would water get trapped in 17 the vagina? Why would it not make its way 18 further up the reproductive tract?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 A. My suspicion is that it doesn't 21 remain entrapped very long and it falls out 22 the vagina.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. I understand falling out, but 25 if you're correct and if there is an open</p>

Judith Wolf, M.D.

Page 582	Page 584
<p>1 system, why would it not make its way further 2 up the reproductive tract?</p> <p>3 DR. THOMPSON: Object to form.</p> <p>4 A. I'm going to say I'm not sure 5 that anyone has proven it doesn't. It's -- 6 water would be a challenging thing to study 7 since the body has water all the time.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. I also have one question, going 10 back to Ms. Garber's client, Ms. Gallardo.</p> <p>11 Cramer 2016 we talked about 12 yesterday. And if you need me to pull it 13 back out, I can. But that showed no 14 significant association for ovarian 15 endometrioid cancer in postmenopausal women, 16 correct?</p> <p>17 A. I'd have to look at that part 18 of the paper again. I don't remember that 19 specific.</p> <p>20 Does it have an exhibit number? 21 Maybe I have it here.</p> <p>22 (Technical recess requested by 23 the stenographer.)</p> <p>24 (Recess taken, 1:12 p.m. to 25 1:14 p.m. CDT)</p>	<p>1 Did you attempt to determine 2 how much talc Ms. Judkins was exposed to over 3 the time period she claims to have used talc 4 from approximately 1970 to 2015?</p> <p>5 A. So that was a 46-year period of 6 time. And so if she was using it daily, 7 which is what she reported in her deposition, 8 that would be thousands of times. And the 9 frequency and the duration of her use causing 10 her cancer is what's supported by the 11 epidemiologic literature, looking at duration 12 and frequency of use.</p> <p>13 Q. And as we've talked in the 14 other cases, there may be some level of 15 exposure that you, you know, would question 16 or say did not support talcum powder use as a 17 cause or a contributing cause of ovarian 18 cancer, but in Ms. Judkins' case, you believe 19 that she had sufficient exposure, correct?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. So there are times in reviewing 22 the whole individual case where I would not 23 think that talcum powder played a role. 24 Again, that would be if there was no way for 25 the talcum powder to get there, the woman had</p>
Page 583	Page 585
<p>1 BY MR. ZELLERS:</p> <p>2 Q. Dr. Wolf, when we went off the 3 record, I'd asked the question as to whether 4 you agree that the Cramer 2016 article showed 5 no significant association for ovarian 6 endometrioid cancer in postmenopausal women.</p> <p>7 A. So in that paper, Table 4 I'm 8 looking at, he separated out the different 9 cell types. There were 30 premenopausal 10 women with endometrioid-type -- cell-type 11 cancer and there were 37 postmenopausal 12 women. Both of them had a positive 13 association; 1.34 in premenopausal, 1.36 in 14 postmenopausal. The confidence intervals 15 crossed 1 in both of them.</p> <p>16 So there was a positive 17 association. In neither pre- or 18 postmenopausal was it statistically 19 significant, but the numbers for each of 20 those were small when you separated them out.</p> <p>21 Q. Thank you.</p> <p>22 I have asked previously whether 23 you attempted to determine -- and let me just 24 ask a new question with respect to 25 Ms. Judkins.</p>	<p>1 had a hysterectomy and/or her tubes tied, or 2 she maybe used it once.</p> <p>3 But Ms. Judkins used it for 4 many years daily, thousands of times, which 5 is supported by the epidemiologic literature.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. One of the assumptions you've 8 made in this case is that Ms. Judkins did use 9 talcum powder on her perineum daily for 10 45 years, correct?</p> <p>11 A. That is what is reported in her 12 deposition.</p> <p>13 Q. Do you have any more specifics 14 of how it was that Ms. Judkins claimed to 15 have applied talcum powder to her body?</p> <p>16 A. I can't recall whether she put 17 it in her underwear or on a pad or directly 18 on.</p> <p>19 She says in her deposition on 20 page 18, what was -- she was asked: What was 21 your routine in terms of during the day when 22 you would use Johnson's Baby Powder?</p> <p>23 I used it every time I got out 24 of the shower.</p> <p>25 And then I believe she was</p>

Judith Wolf, M.D.

Page 586	Page 588
<p>1 physically active, and so she was doing some 2 sports and she showered twice a day, she used 3 it twice a day.</p> <p>4 Q. As in the other cases, your 5 methodology is to believe the testimony of 6 the plaintiffs with respect to their talcum 7 powder use, correct?</p> <p>8 A. Yes. Again, she was deposed. 9 She was under oath when she gave her 10 deposition, as was, I think, her husband gave 11 a deposition also. So yes.</p> <p>12 Q. Did Ms. Judkins have a personal 13 history of cancer?</p> <p>14 A. She did. She had a basal cell 15 skin cancer on her forearm.</p> <p>16 Q. There's no mention of her talc 17 use in the medical records; is that right?</p> <p>18 A. No, not to my knowledge.</p> <p>19 Q. And you did not see anything in 20 the medical records that would evidence a 21 discussion that Ms. Judkins had with her 22 treating physicians about talcum powder use; 23 is that right?</p> <p>24 A. I did not see anything.</p> <p>25 Q. Did you do any type of</p>	<p>1 Q. In Ms. Judkins' case, as in 2 each of the cases we've discussed, there's 3 the potential for unknown causes of ovarian 4 cancer. But in your view, talcum powder use 5 is a cause of her ovarian cancer, correct?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. In my view, after review of all 8 her medical records and her depositions and 9 her forms, that talcum powder is a cause of 10 her ovarian cancer -- her talcum powder use.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. All of the questions that I've 13 asked you in the past as to whether you have 14 individual opinions about asbestos or heavy 15 metals or fragrances that may be contained in 16 the talc, your opinion in this case is not as 17 to those specific ingredients, but it's to 18 the ingredients as a whole, the talc, which, 19 in your opinion, in this case caused 20 Ms. Judkins' ovarian cancer, correct?</p> <p>21 DR. THOMPSON: Object to form, 22 misstates her testimony.</p> <p>23 A. So it's the talc which contains 24 or had been found to contain asbestos talc fibers, the heavy metals, nickel, chromium,</p>
<p style="text-align: center;">Page 587</p> <p>1 investigation in terms of whether Ms. Judkins 2 had any exposure or potential exposure to 3 asbestos?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. Again, there was a series of 6 questions in her deposition about what kind 7 of work she did, where did she live, was 8 there construction in her home, was there 9 construction around her house. And there was 10 nothing that indicated to me that she ever 11 had any occupational or long-term exposure to 12 asbestos.</p> <p>13 BY MR. ZELLERS:</p> <p>14 Q. I saw some mention in her 15 deposition about Ms. Judkins and her husband, 16 they purchased a house, they were told the 17 house has an issue with asbestos. They may 18 have been in the house for a short period of 19 time before the asbestos was removed.</p> <p>20 Did you see that?</p> <p>21 A. Yes.</p> <p>22 Q. Would that -- or strike that.</p> <p>23 Does that impact your opinion 24 at all in this case?</p> <p>25 A. No.</p>	<p style="text-align: center;">Page 589</p> <p>1 cobalt that we've talked about, and some 2 irritating fragrance ingredients.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. Once again, we have no evidence 5 in Ms. Judkins' case of any samples of the 6 talcum powder she used that you're aware of; 7 is that right?</p> <p>8 A. I'm not aware that we have any 9 of the samples of her baby powder that she 10 used.</p> <p>11 Q. You have not communicated or 12 talked with Ms. Judkins; is that right?</p> <p>13 A. I actually was on a phone call 14 with Ms. Judkins one time.</p> <p>15 Q. When was that?</p> <p>16 A. About a year and a half ago. 17 It was sometime deep in the pandemic, so...</p> <p>18 Q. And for how long did the phone 19 call last?</p> <p>20 A. It was with attorneys. I don't 21 remember how long the phone call was. Maybe 22 30, 40 minutes.</p> <p>23 Q. And what was the purpose of the 24 phone call?</p> <p>25 DR. THOMPSON: And I think that</p>

Judith Wolf, M.D.

Page 590	Page 592
<p>1 is privileged as to any content of the 2 conversation that she had with the 3 attorneys and Ms. Judkins.</p> <p>4 MR. ZELLERS: Well, if the 5 doctor obtained any information from 6 that call that she's relying on, I 7 think that would be discoverable, 8 so...</p> <p>9 DR. THOMPSON: I disagree.</p> <p>10 MS. GARBER: I think it's all 11 privileged.</p> <p>12 DR. THOMPSON: I think I'm 13 going to instruct her not to answer 14 the content of that discussion.</p> <p>15 MS. GARBER: I think you can 16 ask her what she learned from the 17 discussion, but I don't think you can 18 ask her what was discussed or what she 19 gleaned from the conversation.</p> <p>20 DR. THOMPSON: Well, isn't that 21 the same thing?</p> <p>22 MS. GARBER: I don't think so.</p> <p>23 MR. ZELLERS: Well, I believe 24 that it would be discoverable, 25 anything that was communicated to her</p>	<p>1 record. 2 (Recess taken, 1:24 p.m. to 3 1:27 p.m. CDT)</p> <p>4 BY MR. ZELLERS: 5 Q. Dr. Wolf, when we broke, you 6 were describing a phone conversation that you 7 had with the lawyers for Ms. Judkins and with 8 Ms. Judkins herself -- was it about a year 9 and a half ago you thought --</p> <p>10 A. Yes.</p> <p>11 Q. -- lasted maybe 30 or 12 40 minutes?</p> <p>13 Other than the lawyers and 14 Ms. Judkins and yourself, was anyone else on 15 the call?</p> <p>16 A. Not to my recollection.</p> <p>17 Q. What, if anything, did you 18 learn in that call that you're relying on in 19 terms of giving your opinions in this case?</p> <p>20 DR. THOMPSON: And I'll object 21 to -- I'll object to form, but 22 allowing her, obviously, to answer the 23 question.</p> <p>24 A. Nothing.</p> <p>25 ///</p>
<p style="text-align: center;">Page 591</p> <p>1 that she relies on in terms of giving 2 her opinions, which I think Ms. Garber 3 would be -- what you're suggesting, 4 what did she learn from that, you 5 know, that's relevant to her opinions.</p> <p>6 DR. THOMPSON: Not from what 7 she learned from the attorneys or 8 their clients, and I'm going to 9 instruct her not to answer that 10 question.</p> <p>11 MR. ZELLERS: Okay. So I 12 disagree. I do think that it should 13 be discoverable and is discoverable, 14 any information she obtained from that 15 phone call --</p> <p>16 BY MR. ZELLERS: 17 Q. Which in your view lasted 30 or 18 40 minutes; is that right?</p> <p>19 A. My recollection.</p> <p>20 MR. ZELLERS: -- that relates 21 to her opinions in this case. So --</p> <p>22 DR. THOMPSON: I don't think it 23 does. Just a minute, let me consult 24 with her.</p> <p>25 MR. ZELLERS: We'll go off the</p>	<p style="text-align: center;">Page 593</p> <p>1 BY MR. ZELLERS: 2 Q. There were no facts 3 communicated to you that you relied upon 4 other than, you know, what you looked at in 5 the records?</p> <p>6 A. What I already had looked at.</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 BY MR. ZELLERS: 9 Q. Do you have or have you at any 10 time had any physician-patient relationship 11 with Ms. Judkins?</p> <p>12 A. No.</p> <p>13 Q. Other than that one occasion, 14 have you ever spoken with Ms. Judkins?</p> <p>15 A. No.</p> <p>16 Q. Have you ever spoken with 17 Ms. Judkins' husband?</p> <p>18 A. No.</p> <p>19 Q. Have you ever spoken with any 20 of her treating physicians?</p> <p>21 A. Not regarding her care.</p> <p>22 Q. So in what context have you 23 spoken with any of her treating physicians?</p> <p>24 A. So her surgeon, Dr. Lloyd West, 25 was a fellow of mine about 20 years ago, and</p>

Judith Wolf, M.D.

Page 594	Page 596
<p>1 I've probably seen him socially at meetings 2 once or twice since then.</p> <p>3 Q. You have never discussed 4 Ms. Judkins' case or care with him; is that 5 right?</p> <p>6 A. That's correct.</p> <p>7 Q. Is he aware that you're serving 8 as an expert witness in this case?</p> <p>9 A. I do not know.</p> <p>10 Q. Is he aware, from any 11 conversations you've had with him, that 12 you're serving as an expert witness in this 13 case?</p> <p>14 A. No.</p> <p>15 Q. You are -- strike that.</p> <p>16 You have reviewed a report from 17 Dr. Godleski relating to his particle 18 findings in Ms. Judkins' case, correct?</p> <p>19 A. Yes.</p> <p>20 Q. Do I understand from your 21 earlier testimony that even without 22 Dr. Godleski's findings, your opinion would 23 still be that Ms. Judkins' talcum powder use 24 was a cause of her ovarian cancer?</p> <p>25 A. Yes, for the reasons I talked</p>	<p>1 left ovary and left fallopian tube; is that 2 right?</p> <p>3 And I'm looking at page 3 of 4 Dr. Godleski's report, and specifically at 5 the second paragraph, first sentence of the 6 second paragraph.</p> <p>7 A. Yes. Yes.</p> <p>8 Q. Dr. Godleski found -- withdraw 9 that.</p> <p>10 You're not a surgical 11 pathologist; is that right?</p> <p>12 A. I'm not a surgical pathologist, 13 but I routinely look at surgical pathology 14 for my patients.</p> <p>15 Q. All right. Dr. Godleski found 16 932 particles in the tissue blocks.</p> <p>17 And I'm looking at page 4.</p> <p>18 A. I see that.</p> <p>19 Q. Only 17 of those 932 particles 20 were what he reports as nonfibrous talc 21 particles; is that right?</p> <p>22 A. He reports 17 were talc 23 particles, yes.</p> <p>24 Q. He describes them, at least at 25 the bottom of page 3, as nonfibrous talc</p>
<p style="text-align: center;">Page 595</p> <p>1 about before, that I know he only gets a 2 small portion of the tissue to evaluate.</p> <p>3 Q. I'm going to mark 4 Dr. Godleski's report in Ms. Judkins' case as 5 Deposition Exhibit 48. (Whereupon, Deposition Exhibit 6 Wolf-48, 6/18/21 Godleski Expert 7 Report re: Judkins, was marked for 8 identification.)</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. In your report, you do rely on 11 and reference Dr. Godleski's pathology report 12 in forming your case-specific opinions; is 13 that right?</p> <p>14 A. Yes.</p> <p>15 Q. And I see that on page 22, 16 middle of the page.</p> <p>17 A. I see that.</p> <p>18 Q. Dr. Godleski looked at eight 19 tissue blocks in Ms. Judkins' case; is that 20 right?</p> <p>21 A. Yes.</p> <p>22 Q. Those blocks were from 23 Ms. Judkins' right fallopian tube, right 24 pelvic and paraaortic lymph nodes, cervix,</p>	<p style="text-align: center;">Page 597</p> <p>1 particles?</p> <p>2 A. Yes.</p> <p>3 Q. And those were found in only 4 three of the eight blocks he looked at; is 5 that right?</p> <p>6 A. Yes.</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. 483 of the 932 particles had a 10 calcium composition according to 11 Dr. Godleski; is that right?</p> <p>12 A. That's right, and that would 13 not be uncommon in ovarian cancer, to find 14 calcium.</p> <p>15 Q. And that has nothing to do with 16 whether talc is involved or not, correct?</p> <p>17 A. It's a finding that's common in 18 ovarian cancer.</p> <p>19 Q. Do you know what kind of 20 particles have a calcium composition?</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. Well, many things have a 23 calcium composition. Bone does. Teeth do. 24 Ovarian cancer makes calcium deposits.</p> <p style="text-align: center;">///</p>

Judith Wolf, M.D.

	Page 598	Page 600
1	BY MR. ZELLERS: 2 Q. Dr. Godleski also says in his 3 report that 272 particles had a variety of 4 constituents indicative of exogenous 5 material, including 26 nontalc magnesium 6 silicate particles, sometimes with other 7 cations, and 246 other exogenous particles, 8 which included various combinations of metals 9 and/or silicon and/or nonmetallic elements, 10 page 4, is that right? 11 A. I see that, yes. 12 Q. You don't know what 13 differentiates the 272 exogenous particles 14 from the other 246 exogenous particles to 15 which Dr. Godleski is referring, do you? 16 DR. THOMPSON: Object to form. 17 A. Well, he describes what the 272 18 are, magnesium silicate particles with other 19 cations, and the 246 are other exogenous 20 particles, including metals, silicon and 21 nonmetallic elements. So he's separated them 22 based on what they were. 23 BY MR. ZELLERS: 24 Q. What are exogenous particles? 25 A. Something that comes in from	1 the calcium composition have played a role in 2 Ms. Judkins' development of ovarian cancer? 3 DR. THOMPSON: Object to form. 4 A. No, those were felt to be 5 endogenous, meaning they came from within her 6 body, not from the outside. And as I 7 mentioned, it's quite a common thing to see 8 calcium deposits in ovarian cancer. 9 BY MR. ZELLERS: 10 Q. Regardless of the cause, 11 correct? 12 A. Yes. 13 Q. In any of the Dr. Godleski 14 records that you have referenced in your 15 report, did Dr. Godleski find evidence of 16 chronic inflammation around these talc 17 particles? 18 A. Not to my recollection, but 19 I -- that wouldn't be something that would be 20 necessarily visible. 21 Q. If you're seeing talc particles 22 in human tissue, would you expect that they 23 would be associated with some type of 24 inflammatory response? 25 A. Yes, but not necessarily a
1	the outside. 2 Q. Okay. In doing your and 3 arriving at your case-specific opinions, did 4 you do any investigation into trying to 5 figure out what these other particles 6 actually were? 7 DR. THOMPSON: Object to form. 8 A. Well, he states what a lot of 9 them were. Magnesium silicate. 10 I don't know what the metals 11 were. The metals could be heavy metals that 12 had been found in baby powder. 13 Silicon, I know what that is. 14 The other nonmetallic elements, 15 I did not talk to him or ask him what those 16 were. 17 BY MR. ZELLERS: 18 Q. It does not appear that 19 Dr. Godleski, at least in the tissue samples 20 that he examined, found either asbestos or 21 what you described earlier as talc fibers, 22 correct? 23 A. No. What he found were talc 24 particles. 25 Q. Okay. Could the particles or	1 visible inflammatory response. I think 2 you're saying would there be white blood 3 cells, would there be macrophages? There 4 were. There sometimes are and you can see 5 those, but because they're not there doesn't 6 mean there isn't an inflammatory response. 7 Things like cytokines and 8 growth factors wouldn't show up on pathology. 9 Q. Would there be evidence on a 10 pathology slide of an inflammatory response? 11 DR. THOMPSON: Objection, asked 12 and answered. 13 A. I think I just answered that 14 question. 15 BY MR. ZELLERS: 16 Q. There may be or may not be, is 17 that -- 18 A. You may see white blood cells, 19 but with chronic inflammation, you don't need 20 to see it. The things that I mentioned, 21 growth factors and cytokines, you don't see 22 on a pathology slide. 23 Q. And for me to try to understand 24 your answer, you may see some evidence, but 25 you may not, for the reasons you've stated,

Judith Wolf, M.D.

	Page 602	Page 604
1	correct? 2 A. You may see some white blood 3 cells, lymphocytes, macrophages, you may not, 4 because chronic inflammation isn't always 5 something that's visible on a pathology 6 specimen. 7 Q. Ms. Judkins was diagnosed with 8 her cancer in December of 2016; is that 9 right? 10 A. Yes. 11 Q. She completed her chemotherapy 12 in January of 2018; is that right? 13 A. She completed in June of 2017. 14 Q. All right. So June of 2017, 15 she completed her chemotherapy. 16 Are you aware of any evidence 17 that Ms. Judkins has had a reoccurrence of 18 her ovarian cancer? 19 A. I am not. When I wrote this 20 report anyway, the last records were from 21 July of 2020 when she was found to have no 22 evidence of disease. 23 Q. Have you seen any of her 24 treatment records in 2021 that also, at least 25 my understanding is, do not indicate a	1 Q. Do you agree that her cancer 2 was sporadic? 3 DR. THOMPSON: Object to form. 4 A. No. Sporadic means that you 5 don't know any cause of the cancer. 6 BY MR. ZELLERS: 7 Q. As we talked earlier, generally 8 most ovarian cancers are sporadic, but in 9 this case, because of her talcum powder use, 10 you do believe that talcum powder use was a 11 cause or a contributing cause to her ovarian 12 cancer, correct? 13 DR. THOMPSON: Object to form. 14 A. Talcum powder was the cause of 15 her cancer. And I'm just going to clarify 16 that generally in the literature, sporadic 17 versus genetic implies inherited versus 18 noninherited; but sporadic really just means 19 you don't know the cause. 20 BY MR. ZELLERS: 21 Q. And I think we've covered this, 22 but in the majority of cases of ovarian 23 cancer, the physicians do not know the cause, 24 correct? 25 A. In the majority of patients
1	recurrence? 2 A. Yeah, I don't -- my 3 recollection is I haven't seen anything more 4 frequently than that. 5 Q. All right. Your last 6 records -- and it would be reflected in your 7 report -- are -- 8 A. Was from July 2020. 9 Q. Okay. From the records you've 10 seen, there's no evidence that Ms. Judkins' 11 ovarian cancer metastasized; is that right? 12 DR. THOMPSON: Object to form. 13 A. Her ovarian cancer has not 14 recurred. At the time of diagnosis, it was 15 already felt to have been metastasized to her 16 colon. That's why she was a stage 2, the 17 outside of her colon. And at the time of the 18 last record that I saw, she has had no 19 recurrence. 20 BY MR. ZELLERS: 21 Q. It appears that she's doing 22 well, from at least the records and materials 23 that you've seen and you've reviewed? 24 A. Thus far, she's free of 25 disease.	1 with ovarian cancer, there's not an inherited 2 mutation that is the cause. 3 Q. So do you agree with me -- I 4 mean, is that a yes with an explanation? 5 DR. THOMPSON: Object to form. 6 A. I don't agree with you. I 7 agree with the statement that I said, that in 8 the majority of cases, there is not an 9 inherited genetic mutation. 10 BY MR. ZELLERS: 11 Q. And if there is not an 12 inherited genetic mutation, those cases, 13 other than perhaps a small number of talc 14 cases, would be sporadic, correct? 15 DR. THOMPSON: Object to form. 16 A. So in the cases that are not 17 inherited, those are -- those in the 18 literature are considered sporadic. In the 19 sporadic, meaning the noninherited, sometimes 20 you can identify a cause. Sometimes you can 21 identify things that -- multiple things that 22 may be -- that can be a cause of their 23 cancer. 24 BY MR. ZELLERS: 25 Q. Do most women with epithelial

Judith Wolf, M.D.

Page 606	Page 608
<p>1 ovarian cancer fit the profile of Ms. Judkins 2 in terms of age at diagnosis, high-grade 3 serous? And is she in the group of patients 4 that you most commonly see that are diagnosed 5 with ovarian cancer?</p> <p>6 A. So there are some things about 7 her case that are common and some that are a 8 little outside of common. She has -- as we 9 talked about, she's slightly younger, but not 10 far off the average age. The high-grade 11 serous is common.</p> <p>12 The fact that she was found at 13 stage 2B is not that common. 75% of women 14 are found at stage 3 or 4.</p> <p>15 The fact that her treatment 16 included intraperitoneal chemotherapy is not 17 common. There aren't very many women who are 18 able to tolerate that therapy, and there 19 aren't that many people who are good 20 candidates for it because of their disease.</p> <p>21 Q. Given when her cancer was 22 diagnosed, the stage, the treatment that she 23 was able to receive, her course after the 24 treatment, do you believe that Ms. Judkins 25 has a good prognosis?</p>	<p>1 BY MR. ZELLERS: 2 Q. That's a risk that any woman 3 with ovarian cancer has, correct? 4 DR. THOMPSON: Object to form. 5 A. That their cancer will recur?</p> <p>6 BY MR. ZELLERS: 7 Q. May recur. 8 A. That their cancer may recur, 9 yes. 10 Q. Yes. There's nothing unusual 11 about Ms. Judkins' case that would cause you 12 to think it's more likely that her cancer 13 would recur; is that right? 14 DR. THOMPSON: Object to form. 15 A. I don't think I said that.</p> <p>16 BY MR. ZELLERS: 17 Q. If anything, there would be a 18 risk that it may recur, less of a risk just 19 because of the relatively early stage it was 20 diagnosed and the treatment that she's 21 undergone? 22 DR. THOMPSON: Object to form. 23 A. Well, I hope. I hope.</p> <p>24 BY MR. ZELLERS: 25 Q. All right. I want to ask you</p>
<p>1 DR. THOMPSON: Object to form. 2 A. I believe that she's done well 3 so far; that she still has a chance that her 4 cancer will come back. She had the best 5 opportunity to do as well as she could. She 6 had relatively early stage, 2B, instead of 3 7 or 4. She had an aggressive surgery where 8 all the visible cancer was removed, and she 9 had the most aggressive therapy that we had 10 at the time in 2017. I would not consider 11 her cured.</p> <p>12 BY MR. ZELLERS: 13 Q. While there's always a risk of 14 recurrence, it sounds that your opinion is 15 she has a good prognosis, but you would not 16 say that she's cured, and there's always the 17 possibility of a reoccurrence; is that fair? 18 DR. THOMPSON: Object to form, 19 misstates the testimony. 20 A. I think that she's had 21 everything done that she possibly could to 22 have the best prognosis that she possibly 23 could. I'm still concerned that her cancer 24 will recur, and if her cancer recurs, she 25 will highly likely die from it.</p>	<p>1 some questions about the Swann case now. 2 A. Okay. 3 Q. Do we want to take a break or 4 just go right in? 5 DR. THOMPSON: Do you 6 anticipate Swann taking about the same 7 amount of time? Shall we take a break 8 and then finish Swann? 9 MR. ZELLERS: No, that's -- 10 it's up to you. 11 DR. THOMPSON: I'd rather -- I 12 think you'd rather not take a break in 13 the middle of Swann, right? 14 MR. ZELLERS: Yeah, I'd rather 15 not take a break in the middle of 16 Swann. 17 DR. THOMPSON: So let's take 18 five minutes now. 19 (Recess taken, 1:47 p.m. to 20 1:56 p.m. CDT) 21 BY MR. ZELLERS: 22 Q. Dr. Wolf, you have also 23 prepared a case-specific report in the Swann 24 case; is that right? 25 A. Yes.</p>

Judith Wolf, M.D.

Page 610	Page 612
<p>1 Q. As with your other 2 case-specific reports, the first 21 pages of 3 your report on Ms. Swann is the same as the 4 general amended report in the MDL that we 5 have discussed earlier in this deposition; is 6 that right?</p> <p>7 A. That's correct.</p> <p>8 Q. Are all of the case-specific 9 opinions that you anticipate testifying to at 10 any trial or hearing in the Swann matter set 11 forth in your case-specific report that we 12 have marked as Exhibit 9 to this deposition?</p> <p>13 A. Yes.</p> <p>14 Q. It's your opinion that talcum 15 powder was a cause of Ms. Swann's ovarian 16 cancer, correct?</p> <p>17 A. Yes.</p> <p>18 Q. If she had never used talc, she 19 never would have gotten ovarian cancer; is 20 that your opinion?</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 MS. GARBER: Object to the 23 form.</p> <p>24 A. So my opinion is that her talc 25 use is a cause of her cancer. There are</p>	<p>1 lack of risk factors, if she had not used 2 talc.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. It is possible that had she not 5 used talc, she still would have developed 6 ovarian cancer. That's a possibility, 7 correct?</p> <p>8 MS. GARBER: Object to the 9 form.</p> <p>10 A. Anything is possible.</p> <p>11 BY MR. ZELLERS:</p> <p>12 Q. And if I ask you that question 13 with Ms. Bondurant or Ms. Gallardo or 14 Ms. Judkins, it's the same response. Even if 15 they had not used talc, it's possible that 16 they would have developed ovarian cancer, 17 correct?</p> <p>18 MS. GARBER: Object to the 19 form.</p> <p>20 A. With Ms. Swann and all the 21 other patients that I've testified today, I 22 think the chances of them getting ovarian 23 cancer had they not used talc is highly 24 unlikely.</p> <p>25 ///</p>
<p>1 Page 611</p> <p>2 women who get ovarian cancer who have not 3 used talc, do not have an inherited mutation, 4 do not have any obvious causative risk 5 factor, but she does, and she used talcum 6 powder for 40 years according to her doctor's 7 deposition.</p> <p>7 BY MR. ZELLERS:</p> <p>8 Q. Even if -- well, strike that. 9 If Ms. Swann had never used 10 talc, she still may have developed ovarian 11 cancer, correct?</p> <p>12 MS. GARBER: Object to the 13 form.</p> <p>14 A. Ms. Swann did use talc.</p> <p>15 BY MR. ZELLERS:</p> <p>16 Q. I understand.</p> <p>17 A. So I'm --</p> <p>18 Q. I'm asking you hypothetically, 19 had she not used talc, she still may have 20 developed ovarian cancer, correct?</p> <p>21 MS. GARBER: Object to the 22 form.</p> <p>23 A. Ms. Swann's chances of 24 developing ovarian cancer if she had not used 25 talc I believe would be quite low given her</p>	<p>1 Page 613</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. How old was Ms. Swann when she 3 was diagnosed with ovarian cancer?</p> <p>4 A. 62.</p> <p>5 Q. Could Ms. Swann's age have 6 caused her ovarian cancer?</p> <p>7 A. So she's right at the average 8 age. So if we look at age being a risk 9 factor, think about 62-63 being sort of the 10 1, if we were looking at a relative risk, and 11 someone under that age it would be less than 12 1, and someone over that age it would be 13 greater than 1. So it's sort of a neutral 14 piece of information in her case.</p> <p>15 Q. But you agree that her age 16 would increase her risk for more mutations, 17 correct?</p> <p>18 A. The longer anyone lives, they 19 can get more mutations anywhere on their 20 body.</p> <p>21 Q. Do you agree that Ms. Swann's 22 family history of cancer played a role in her 23 development of ovarian cancer?</p> <p>24 A. Ms. Swann's family history was 25 a little confusing to me because it was quite</p>

Judith Wolf, M.D.

Page 614	Page 616
<p>1 inconsistent in her records. My recollection 2 is that she had a paternal grandmother who 3 had some type of cancer, not clear what type, 4 and then Dr. Miriani, and I don't remember 5 what -- which doctor Dr. Miriani was for 6 Ms. Swann -- describes a family history of 7 ovarian cancer, but doesn't give details. 8 So I'm not sure what the family 9 history was in her case. 10 Q. You set forth in your report on 11 page 21 that Dr. Miriani describes a family 12 history of ovarian cancer, correct? 13 A. I just said that. 14 Q. So that's a yes; is that right? 15 DR. THOMPSON: Object to form. 16 A. Yes, a history without details 17 of who had ovarian cancer. 18 BY MR. ZELLERS: 19 Q. Are you aware that Dr. Miriani 20 and Dr. Elbendary records indicate that 21 Ms. Swann had a grandmother with ovarian 22 cancer? 23 A. My recollection is I didn't -- 24 couldn't figure out who had ovarian cancer, 25 but there was a paternal grandmother who had</p> <p>1 wasn't clear who had it. And there was 2 another place that said it was a paternal 3 grandmother who's had some type of cancer. 4 So I'm not entirely clear who 5 had the cancer. 6 BY MR. ZELLERS: 7 Q. What records are you aware of 8 that contradict that Ms. Swann's grandmother 9 had ovarian cancer? 10 DR. THOMPSON: Object to form. 11 A. Well -- 12 BY MR. ZELLERS: 13 Q. Or Ms. -- 14 A. I don't have all of her 15 records. 16 MR. ZELLERS: Did I misstate my 17 question? 18 BY MR. ZELLERS: 19 Q. Let me ask my question again in 20 case I misspoke. 21 Can you identify any records of 22 Ms. Swann that contradict that her 23 grandmother had ovarian cancer as appears to 24 be the case from the history provided on 25 Deposition Exhibit 49?</p>	
Page 615	Page 617
<p>1 some type of cancer that somebody reported. 2 Q. Let's mark as Deposition 3 Exhibit 49 a page from Ms. Swann's medical 4 records. 5 (Whereupon, Deposition Exhibit 6 Wolf-49, Medical Record(s), 7 SWANNV_MBMC_0034, was marked for 8 identification.) 9 BY MR. ZELLERS: 10 Q. This is a record from Missouri 11 Baptist Medical Center; is that right? 12 A. Yes. 13 Q. And under Family History, it 14 states: Grandmother had ovarian cancer. 15 A. I see that. 16 Q. Is that right? 17 A. Yes. 18 Q. Does that help clarify who it 19 was in the family that had ovarian cancer? 20 DR. THOMPSON: Object to form. 21 A. This is one place that it says 22 that, but I'm telling you that other places 23 it was not consistent. So I still feel like 24 somebody had ovarian cancer. This record 25 says it was a grandmother. Other places it</p> <p>1 DR. THOMPSON: Objection, and 2 she's already described some of the 3 contradictory -- 4 MR. ZELLERS: Well, I -- with 5 all due respect -- 6 DR. THOMPSON: Well, you asked 7 me, did you not? 8 BY MR. ZELLERS: 9 Q. All I'm trying to find out, 10 because I don't think I have an answer, are 11 there any specific records that you can 12 direct me to, Dr. Wolf, that contradict that 13 Ms. Swann's grandmother had ovarian cancer? 14 DR. THOMPSON: Object to form. 15 A. So the records -- I don't have 16 all of her records in front of me, but when I 17 reviewed her records, it was unclear to me 18 what her family history was. 19 As her family history reported, 20 and I believe this was -- I'm not sure, I 21 don't say who it was from -- but a paternal 22 grandmother had some type of cancer, and that 23 may have been from her daughter's deposition. 24 And Dr. Miriani's records 25 describe somebody in the family as having</p>	

Judith Wolf, M.D.

	Page 618	Page 620
1	ovarian cancer, but I don't know who that is.	1 A. So Lydia Houston is her
2	BY MR. ZELLERS:	2 daughter, is Ms. Swann's daughter, correct?
3	Q. All right. It's important to	3 Q. Yes.
4	pin down the history to determine whether or	4 A. And what's your question?
5	not the family history is a risk factor in a	5 Q. My question is: Does this help
6	given patient's case, correct?	6 refresh your recollection or provide
7	A. And --	7 information that Ms. Swann had a paternal
8	Q. Is that correct?	8 Aunt with breast cancer?
9	A. It is. And I found it	9 A. This makes it seem like it
10	difficult to pin down her family history in	10 was -- so this is her -- this is her daughter
11	reviewing her records.	11 talking. My grandfather died...
12	Q. All right. Ms. Swann reported	12 (Sotto voce document review by
13	in her deposition that she had a paternal	13 the witness.)
14	aunt with breast cancer, correct?	14 A. So those are from her father's
15	A. Paternal grandmother.	15 side, not Ms. Swann's side, if I'm reading
16	MR. ZELLERS: Would you mark	16 this correctly.
17	this as Deposition Exhibit 50?	17 This is Ms. Swann's daughter,
18	(Whereupon, Deposition Exhibit	18 Ms. Huston, and the question is about her
19	Wolf-50, Excerpt from Lydia Huston	19 father and his family, and these are the
20	Deposition, was marked for	20 biological father's parents and his children.
21	identification.)	21 So these would be on
22	BY MR. ZELLERS:	22 Ms. Swann's father's side, not Ms. Swann's
23	Q. I've handed you what we've	23 side. Yes?
24	marked as Deposition Exhibit 50. It is some	24 BY MR. ZELLERS:
25	excerpts from the deposition of Lydia Huston.	25 Q. This is Ms. Huston.
	Page 619	Page 621
1	At the very bottom of the page,	1 A. Ms. Swann's daughter?
2	so page 13 -- the first page of the	2 Q. Yes.
3	exhibit --	3 A. And she's being asked about her
4	A. Yeah, I see page 13.	4 biological father and her biological father's
5	Q. -- but page 13 in the box, the	5 parents and their family history.
6	very last line, line 25.	6 So this is all family history
7	QUESTION: Okay. Did your	7 that has no blood relationship to Ms. Swann.
8	father have siblings? Your biological	8 Q. I have another deposition
9	father?	9 excerpt here, so let me -- I will clear that
10	Yes.	10 up. And then if I have some additional
11	QUESTION: Do you know their	11 questions before we stop here, I will ask
12	names?	12 them of you.
13	I do.	13 A. Okay.
14	And then she gives a number of	14 Q. Did you see any notation in the
15	names.	15 records that Ms. Swann's mother died at a
16	Then if we go down to page 15,	16 young age?
17	question starting at line 9: Okay. Are Mae,	17 A. I don't recall that. I don't
18	Minnie, Flora, Virgie, Annise and Annette	18 know if there's something more in this about
19	still living?	19 her mother, her maternal grandmother.
20	ANSWER: No. Mae Francis is	20 MR. ZELLERS: Let's take a
21	deceased and Annette is deceased.	21 break if we can. I need five minutes
22	QUESTION: Do you know what	22 and then we'll continue.
23	their causes of death were?	23 DR. THOMPSON: Okay. Sure.
24	ANSWER: Breast cancer for both	24 (Recess taken, 2:10 p.m. to
25	of them.	25 2:21 p.m. CDT)

Judith Wolf, M.D.

	Page 622	Page 624
1	BY MR. ZELLERS: 2 Q. Take a look at the deposition, 3 and on block 14 -- or page 14 -- 4 A. Uh-huh. 5 Q. -- Ms. Huston is asked about 6 the names of her mother's parents; is that 7 right? 8 A. Yes. 9 Q. And she gives the name of her 10 mother's father and her mother's -- and her 11 grandmother or Ms. Swann's mother. They are 12 both deceased. 13 She's asked what the cause of 14 death for Ms. Swann's parents was and she 15 states that Ms. Swann's mother died of an 16 accidental gunshot wound in 1957; is that 17 right? 18 A. Yes. 19 Q. One factor when you're looking 20 at family history is whether or not a parent, 21 in this case, a mother, develops cancer, 22 right? That would be one thing you'd look at 23 in a family history? 24 A. Yes. 25 Q. And here, because Ms. Swann's	1 not a family history is a risk factor for 2 ovarian cancer is whether the patient's 3 mother developed ovarian cancer, breast 4 cancer or any other form of cancer, correct? 5 A. That's correct. 6 Q. Okay. 7 A. And to the time of her mother's 8 death, she had not developed any cancers. 9 Q. And here we just don't have any 10 information beyond, obviously -- 11 A. Her death. 12 Q. -- the time that she passed 13 away? 14 A. That's correct. 15 Q. Ms. Swann did not undergo any 16 genetic testing; is that right? 17 A. So I do -- I have not seen a 18 report. According to her daughter's 19 deposition, she had a negative BRCA test 20 based on a home saliva test. 21 Q. And what does that mean? 22 A. That she had a testing done on 23 her saliva. 24 Q. And where did you obtain that 25 information?
1	mother died at a relatively young age, you 2 just don't know whether she would have 3 developed ovarian cancer, breast cancer or 4 any other form of cancer, correct? 5 DR. THOMPSON: Object to form. 6 A. So I'm not sure how old she was 7 when she died, although Ms. Swann was born in 8 '49, so she was -- I don't know how old she 9 was then. 10 BY MR. ZELLERS: 11 Q. Ms. Swann was born in '49 and 12 her mother died in '57? 13 A. '57. 14 Q. Ms. Swann's mother would have 15 died when she was about eight years old; is 16 that right? 17 A. When Ms. Swann was eight years 18 old. 19 Q. When Ms. Swann was eight years 20 old. 21 A. What we don't know is how old 22 was her mother when she had her. 23 Q. My question to you just 24 generally is: One thing that you look at in 25 evaluating a case and evaluating whether or	1 A. The daughter's deposition. 2 Q. Do you have a reference at all? 3 A. I don't have one. No, I don't 4 have the whole deposition in front of me. I 5 don't remember where it was. 6 Q. Is a saliva test the way that a 7 BRCA test is generally done? 8 A. Sometimes. 9 Q. Is it accurate, that type of 10 test? 11 A. It can be, yeah. 12 Q. Is it -- strike that. 13 What's the typical way that a 14 BRCA genetic test is done? 15 A. Usually a blood test, but I've 16 had some patients who have had saliva tests. 17 Q. Do you know whether or not a 18 BRCA saliva test is less accurate than a BRCA 19 blood test? 20 A. Not that I'm aware. I don't 21 know that much about -- first of all, I don't 22 know what saliva test she had, so I can't 23 give you any more information about her test 24 than is in there, in this report. 25 I know that more recently more

Judith Wolf, M.D.

Page 626	Page 628
<p>1 people are getting tests done by saliva than 2 blood as the genetic testing has become more 3 sophisticated and able to look at mutations 4 in saliva as well as blood.</p> <p>5 Q. All right. You have not seen 6 any test result; is that right?</p> <p>7 A. I have not.</p> <p>8 Q. What you saw was a reference in 9 Ms. Huston's deposition that her mother had a 10 BRCA saliva test and that it was negative?</p> <p>11 A. That's correct.</p> <p>12 Q. Do you know when she had that 13 test?</p> <p>14 A. No.</p> <p>15 Q. Do you agree that Ms. Swann 16 could have had an inherited germline mutation 17 given her family history of ovarian cancer 18 and breast cancer?</p> <p>19 MS. GARBER: Object to the 20 form.</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. So given that the -- there's 23 one reference that her paternal grandmother 24 had ovarian cancer. That is the only family 25 member I know for sure had any type of cancer</p>	<p>1 that family history was a cause of her 2 ovarian cancer or that her family history put 3 her at increased risk.</p> <p>4 Q. Because the information we have 5 from the record we looked at is that 6 Ms. Swann had a grandmother with ovarian 7 cancer, that's not enough for you to believe 8 that it would be likely that Ms. Swann could 9 have an inherited germline mutation, correct?</p> <p>10 A. That one family history I do 11 not believe puts her at higher risk for 12 having a germline mutation.</p> <p>13 Q. Did you make any request for 14 the BRCA test or some documentation or some 15 verification of that?</p> <p>16 A. I've asked the attorneys 17 several times if there were any more records, 18 if there's anything else that we could get, 19 and I have not received anything else.</p> <p>20 Q. Much like in one of the earlier 21 cases where you would want to see a surgical 22 report verifying endometriosis for you to 23 rely upon there being a negative BRCA test, 24 you'd want to see the test results or the 25 report and have a better understanding of how</p>
<p>1 that would be related to a genetic mutation. 2 It's hard for me to put much weight on that 3 as a cause for a family history.</p> <p>4 That in itself would not make 5 me raise issues that I would consider a 6 family history of -- suggesting a genetic 7 mutation, inherited genetic mutation.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. Is family history a risk factor 10 for Ms. Swann?</p> <p>11 MS. GARBER: Object to the 12 form.</p> <p>13 A. Family history of a 14 first-degree relative of ovarian cancer or 15 two or more family members with breast cancer 16 or premenopausal -- one with premenopausal 17 cancer would be, but a paternal grandmother 18 would not be a first-degree relative.</p> <p>19 BY MR. ZELLERS:</p> <p>20 Q. So because it's not a 21 first-degree relative, you do not believe 22 that, in Ms. Swann's case, family history was 23 either a risk factor for her ovarian cancer 24 or a cause of her ovarian cancer, correct?</p> <p>25 A. I have no evidence to support</p>	<p>1 it was done?</p> <p>2 DR. THOMPSON: Object to form.</p> <p>3 A. In this case, what I have is 4 her daughter under oath stating that she had 5 a record that -- I think there was a BRCA 6 test. To me, those two things are different. 7 I have no reason to suspect that her daughter 8 made this up.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Well, back in the case that we 11 talked about earlier in your deposition where 12 the patient gave a history of having 13 endometriosis diagnosed, you'd have no 14 suggestion or indication that the patient in 15 that case was making that up, would you?</p> <p>16 DR. THOMPSON: Object to form.</p> <p>17 MS. GARBER: Object to the 18 form.</p> <p>19 A. I never suggested the patient 20 was making it up. I'm saying there was no 21 evidence in her history that she ever had a 22 diagnosis of endometriosis, which is made via 23 surgical -- surgical -- looking surgically.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Well, there was evidence in her</p>

Judith Wolf, M.D.

Page 630	Page 632
<p>1 case and in her history that she gave -- we 2 saw that in multiple records -- that she told 3 physicians that she had had a diagnosis of 4 endometriosis, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 MS. GARBER: Object to the 7 form.</p> <p>8 A. To have a confirmed diagnosis 9 of endometriosis, it has to be surgically 10 confirmed, and she had no -- nothing in her 11 history where she had surgery to confirm that 12 she had endometriosis.</p> <p>13 BY MR. ZELLERS:</p> <p>14 Q. Well, similarly, in Ms. Swann's 15 case, to have, you know, evidence of there 16 being a negative BRCA test -- in Ms. Swann's 17 case, in order for there to be evidence of a 18 negative BRCA test, you'd need to see the 19 test, right?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. Those are two different things. 22 You can't have a diagnosis of endometriosis, 23 a confirmed diagnosis, without having a 24 surgical confirmation that there is 25 endometriosis.</p>	<p>1 reported in the deposition was from age 20 to 2 60, so 40 years, daily or sometimes twice a 3 day. So 40 years, 12,000 times.</p> <p>4 And the duration and frequency 5 of her use is consistent with the support 6 found in the epidemiologic studies that that 7 duration and frequency of use of powder 8 increases and can cause ovarian cancer.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Similar to the other cases 11 we've talked about, there was enough exposure 12 in Ms. Swann's case for you to conclude that 13 talcum powder was a cause of ovarian cancer, 14 correct?</p> <p>15 A. Yes.</p> <p>16 Q. You did not attempt to quantify 17 the exact amount and that would be virtually 18 impossible for anybody to do, correct?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 A. I -- I quantified the presumed 21 number of times she used it. The amount she 22 used in each shake, I don't know, but her 23 history and the usage that she gives is 24 supported in the epidemiologic literature as 25 a risk factor for ovarian cancer development.</p>
<p>1 If someone tells me that her 2 mother had BRCA testing and it was negative, 3 I don't need surgical confirmation for that.</p> <p>4 BY MR. ZELLERS:</p> <p>5 Q. Do we know if the BRCA testing 6 was BRCA1, BRCA2?</p> <p>7 A. The information that I have is 8 what I put in my report, that she had a 9 BRCA-based home saliva test.</p> <p>10 Q. But we don't know when, 11 correct, and we don't know who has done that? 12 You've requested the records, but at least as 13 of now, we don't have the records?</p> <p>14 A. The information I have is what 15 I put in my report.</p> <p>16 Q. Do you believe that the route 17 of talcum powder exposure in Ms. Swann's case 18 was through migration?</p> <p>19 A. I do.</p> <p>20 Q. Did you make an attempt to 21 determine how much talc Ms. Swann was exposed 22 to over the time period that she claims to 23 have used talc?</p> <p>24 DR. THOMPSON: Object to form.</p> <p>25 A. So the use that her daughter</p>	<p>1 BY MR. ZELLERS:</p> <p>2 Q. In forming your opinion on 3 Ms. Swann, you relied on the testimony of her 4 daughter that she used it daily, in her 5 genital area and underwear two times a day; 6 is that right?</p> <p>7 A. At least daily, and sometimes 8 twice a day.</p> <p>9 Q. You don't have any more 10 specifics of how it was that Ms. Swann 11 applied or used talcum powder to her body 12 other than the testimony of her daughter; is 13 that right?</p> <p>14 A. Yes.</p> <p>15 Q. Ms. Swann had a tubal ligation 16 in 1985, correct?</p> <p>17 A. Yes. Yes.</p> <p>18 Q. That would reduce, at least in 19 your opinion, Ms. Swann's talc exposure and 20 thereby reduce her risk of ovarian cancer, 21 correct?</p> <p>22 A. It would still give her 23 15 years of use, which would be adequate in 24 duration and frequency.</p> <p>25 Q. Her only exposure to talc use</p>

Judith Wolf, M.D.

Page 634	Page 636
<p>1 that you believe would be relevant in terms 2 of being a cause of ovarian cancer would be 3 the use prior to 1985; is that right?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. That's when her tract would be 6 open and the talcum powder could get to her 7 ovaries, yes.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. In your report, you rely on 10 Dr. Godleski's pathology report in forming 11 your case-specific opinions; is that right?</p> <p>12 A. Yes.</p> <p>13 Q. Dr. Godleski looked at tissue 14 blocks in Ms. Swann's case. 15 I'll provide you with 16 Dr. Godleski's report.</p> <p>17 A. Thank you.</p> <p>18 Q. We'll mark it as Exhibit 51. 19 (Whereupon, Deposition Exhibit 20 Wolf-51, 4/18/19 Godleski Expert 21 Report re: Swann, was marked for 22 identification.)</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. You have Dr. Godleski's report 25 in front of you; is that right?</p>	<p>1 talc, yes.</p> <p>2 Q. The two talc particles found in 3 the tissues were in blocks C5 from the left 4 ovary and F1 from the right pelvic lymph 5 node; is that right?</p> <p>6 A. Yes.</p> <p>7 Q. So as I understand 8 Dr. Godleski's report, only two of the 324 9 foreign particles he found were talc, 10 correct?</p> <p>11 A. Two particles were talc, yes.</p> <p>12 Q. Two out of the 324 foreign 13 particles?</p> <p>14 A. Yes.</p> <p>15 Q. Do you have any idea as to how 16 those other 322 foreign particles came to be 17 in Ms. Swann's body?</p> <p>18 A. They came in from the outside, 19 like the talc.</p> <p>20 Q. You believe that those foreign 21 particles would have traveled up the genital 22 tract into the ovaries and fallopian tubes 23 and pelvic lymph node, correct?</p> <p>24 A. I believe they could have, yes.</p> <p>25 Q. Do you have any idea what the</p>
Page 635	Page 637
<p>1 A. I do.</p> <p>2 Q. The tissue blocks that 3 Dr. Godleski looked at in Ms. Swann's case, 4 they were from her right and left ovaries, 5 right fallopian tubes and right pelvic lymph 6 node; is that right?</p> <p>7 A. So right and left ovaries and 8 fallopian tubes, so both tubes, I believe.</p> <p>9 Q. Looking at page 2 --</p> <p>10 A. That's where I'm looking also.</p> <p>11 Are you at the top of the page or --</p> <p>12 Q. Top of the page.</p> <p>13 A. Yeah. The right and left 14 ovaries and fallopian tubes, so I assume that 15 means both tubes, and right pelvic lymph 16 node.</p> <p>17 Q. Dr. Godleski found 929 18 particles in the tissue blocks, page 4?</p> <p>19 A. Yes.</p> <p>20 Q. Of the 929 particles that he 21 found, 324 particles had a variety of foreign 22 particles; is that right? And I'm looking at 23 page 4.</p> <p>24 A. A variety of constituents 25 indicative of foreign particles, including</p>	<p>1 other 322 foreign particles might be?</p> <p>2 A. He doesn't give any description 3 about what they were, other than nine other 4 magnesium and silicon particles that were not 5 talc.</p> <p>6 Q. So in forming your 7 case-specific opinion here regarding 8 Ms. Swann, you didn't do any investigation 9 into trying to figure out what those other 10 foreign particles were; is that correct?</p> <p>11 A. I did not.</p> <p>12 Q. Could the other foreign 13 particles have played a role in Ms. Swann's 14 development of ovarian cancer?</p> <p>15 MS. GARBER: Object to the 16 form.</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 A. I don't know what the other 19 particles were, and I'm not aware of other 20 foreign particles that are not talc or 21 asbestos or known carcinogens that have been 22 associated with increased risk of ovarian 23 cancer.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Of the 929 particles in the</p>

Judith Wolf, M.D.

Page 638	Page 640
<p>1 tissue blocks, 605 particles were endogenous 2 to the tissues, correct? 3 A. Yes. 4 Q. What does endogenous to the 5 tissues mean? 6 A. Meaning it comes from within 7 the body. 8 Q. Do you have any idea what role 9 these endogenous particles might have played 10 in the development of Ms. Swann's ovarian 11 cancer? 12 DR. THOMPSON: Object to form. 13 A. He lists the endogenous 14 particles composed of calcium, iron, carbon, 15 sodium, potassium and phosphorus. None of 16 those things cause ovarian cancer. 17 BY MR. ZELLERS: 18 Q. In any of Dr. Godleski's 19 records which you've referenced in your 20 report, did Dr. Godleski find evidence of 21 chronic inflammation around these talc 22 particles? 23 A. I'm just looking at his 24 histologic... 25 (Document review.)</p>	<p>1 everything else in Ms. Swann's case that you 2 reviewed, your opinion would be the same, 3 correct; that her talcum powder use was a 4 cause of her ovarian cancer? 5 A. As I've said in the other 6 cases, this is supportive of talcum powder 7 being the case, but not required -- being a 8 cause of her cancer, but not required. 9 Q. Without Dr. Godleski's report, 10 would your opinion in Ms. Swann's case be the 11 same? 12 A. Ms. Swann had significant -- 13 sufficient use of talcum powder that whether 14 Dr. Godleski saw fibers or particles in her 15 tissue or not would not change my opinion. 16 Q. Are you familiar with an 17 article by Schildkraut in 2021? Davis and 18 Schildkraut are the authors. 19 A. Yes. 20 Q. Let's mark that as Deposition 21 Exhibit 52. 22 (Whereupon, Deposition Exhibit 23 Wolf-52, Genital Powder Use and Risk 24 for Ovarian Cancer... by Davis et al, 25 was marked for identification.)</p>
<p>1 A. He did not see any lymphocytes 2 or macrophages or any other white blood 3 cells, but as I said before, chronic 4 inflammation is not something that's 5 necessarily going to show up in pathology. 6 Cytokines, growth factors don't show up on 7 pathology slides. 8 BY MR. ZELLERS: 9 Q. As we've talked in some of the 10 other cases, you may or may not see a chronic 11 inflammatory response around particles, 12 correct? 13 A. You don't -- you don't have to 14 see it for there to be chronic inflammation. 15 Q. My question though is: You may 16 see chronic inflammation as part of a 17 pathology slide, but you may not for the 18 reasons that you've told us in this 19 deposition? 20 A. You may see lymphocytes or 21 macrophages, which can be a sign of chronic 22 inflammation, but not seeing them does not 23 mean there's not chronic inflammation. 24 Q. Hypothetically, had you not 25 seen Dr. Godleski's report, based upon</p>	<p>1 BY MR. ZELLERS: 2 Q. You're familiar with the 3 Schildkraut meta-analysis that's set forth in 4 this paper; is that right? 5 A. Yes. 6 Q. You rely on it for your opinion 7 that there is a dose-response, and go to your 8 amended report, page 18; is that right? 9 A. I considered it in my opinion. 10 DR. THOMPSON: Object to form. 11 BY MR. ZELLERS: 12 Q. Are you aware that one of the 13 things -- 14 DR. THOMPSON: I'm sorry. Can 15 I just have a second to go to that 16 part of her report, because it -- 17 MS. GARBER: Where did you say 18 you were? 19 DR. THOMPSON: I just want to 20 make sure it's the same Schildkraut 21 study that you're referring to. I 22 think it probably is not. 23 MR. ZELLERS: It probably is 24 not? 25 DR. THOMPSON: I just want to</p>

Judith Wolf, M.D.

Page 642	Page 644
<p>1 check. 2 MR. ZELLERS: Sure. 3 DR. THOMPSON: Page 14? 4 MR. ZELLERS: Page 18. 5 DR. THOMPSON: 18. 6 A. I'm sorry. I didn't realize we 7 were talking about a reference to my report. 8 I thought you asked me -- 9 BY MR. ZELLERS: 10 Q. I did. I did. I'm not -- all 11 I asked you was: Is this something that you 12 looked at and referred to in your report? 13 And I think you said yes, and that was -- 14 A. No. You -- you asked me if I 15 was familiar with this paper. 16 Q. Right. 17 A. And I said yes. 18 DR. THOMPSON: And then you 19 said you referred to this in -- as 20 support for dose-response, correct? 21 Isn't that what you asked her? 22 MR. ZELLERS: I did. 23 DR. THOMPSON: And the 24 Schildkraut referred to for 25 dose-response is 2016, not the paper</p>	<p>1 cancer risk have been conducted predominantly 2 in white populations and histotype-specific 3 analyses among African American populations 4 are limited. 5 That's what the authors state, 6 right? 7 A. That's correct. That's what 8 they state. 9 Q. And do you agree that genital 10 powder use is more common among 11 African American women, if you know? 12 A. Yes. That's been found in most 13 of the studies where there's any 14 African American women. Although he's 15 correct in saying that most of the studies 16 don't have very many African American women. 17 Q. Under Results, the authors 18 state: The prevalence of ever genital powder 19 use for cases was 35.8% among 20 African American women and 29.5% among white 21 women. 22 Is that right? 23 A. Are you looking at the results 24 in the paper or the results in the abstract? 25 Q. I'm looking at the results in</p>
<p>1 that you just gave us. 2 MR. ZELLERS: Ah. Thank you. 3 DR. THOMPSON: You're welcome. 4 BY MR. ZELLERS: 5 Q. So we talked earlier about 6 Schildkraut 2016, correct, generally? 7 A. Generally. 8 Q. So this paper is a 2021 paper 9 by Davis, and Schildkraut is another one of 10 the authors; is that right? 11 A. That's correct. 12 Q. One of the things that 13 Schildkraut was studying in this 2021 article 14 was the potential connection between talc and 15 ovarian cancer in the African-American 16 population; is that right? 17 And I'm looking at the 18 Abstract, Background, for that information. 19 A. Yes, so looking at genital 20 powder use and ovarian cancer risk in 21 African Americans. 22 Q. And specifically the authors 23 state: Genital powder use is more common 24 among African American women; however, 25 studies of genital powder use and ovarian</p>	<p>1 the abstract. 2 A. So the prevalence of ever 3 powder use is what you're talking about? 4 Yes. 35.8% in African American women and 5 29.5% in white women. 6 Q. In this study the authors found 7 that there was not a dose-response 8 relationship regarding frequency or duration 9 of genital powder use and ovarian cancer 10 among African American or white women; is 11 that right? 12 And I'm looking at the 13 Discussion section on page 4 of this article. 14 DR. THOMPSON: Object to form. 15 A. I'm looking for the results 16 that show that, so just give me one minute. BY MR. ZELLERS: Q. Sure. (Document review.) MR. ZELLERS: Let's go off the record just for a second. (Recess taken, 2:50 p.m. to 2:54 p.m. CDT) BY MR. ZELLERS: Q. I had asked you when we took a</p>

Judith Wolf, M.D.

Page 646	Page 648
<p>1 short break if you agreed with the authors' 2 conclusions in this Schildkraut and Davis 3 2021 publication that there was not a 4 dose-response relationship regarding 5 frequency or duration of genital powder use 6 and ovarian cancer among African American or 7 white women.</p> <p>8 MS. GARBER: Object to the 9 form.</p> <p>10 DR. THOMPSON: Object to form.</p> <p>11 A. So I looked at the results of 12 the tables. I read the results and then 13 looked at the tables that correspond to 14 frequency of use, which they looked at less 15 than once a week or more than once a week. 16 They looked at all women, African American 17 women and white women. And they separated 18 out high-grade serous, which is the type of 19 cancer Ms. Swann had, from all other 20 histotypes.</p> <p>21 And in African American women, 22 there were 14 who used -- reported using less 23 than once a week, and their relative risk was 24 1.18. There were 122 who used it more than 25 once a week, and their relative risk was</p>	<p>1 significant, correct? 2 DR. THOMPSON: Object to form. 3 A. The 1.53 is statistically 4 significant.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. All right. Do you disagree 7 with the authors' statement in the Davis and 8 Schildkraut 2021 paper that there was not a 9 dose-response relationship regarding 10 frequency or duration of genital powder use 11 in ovarian cancer among African American or 12 white women?</p> <p>13 A. I do somewhat disagree with it 14 because when I look at the results -- and I'm 15 particularly looking at Ms. Swann, she fits 16 all the categories of the highest risk. 17 There is a higher risk with more frequency of 18 use and high-grade serous in African American 19 women, although not statistically 20 significant, and in African American women 21 who use it less than 20 years, there's a 1.53 22 odds ratio risk, and that would be right 23 where Ms. Swann sits.</p> <p>24 Q. Do you disagree with the 25 finding as it relates to Ms. Swann and her</p>
<p style="text-align: center;">Page 647</p> <p>1 1.34. It was not statistically higher, but 2 it was definitely higher. 3 And then in Table 5 -- and this 4 is on page OF7, looking at duration of use, 5 again, they looked at all participants, 6 separated out African American women, white 7 women, all cases, high-grade serous cases and 8 other histotypes. And now I'm specifically 9 looking again at African American women, 10 high-grade serous, less than 20 years use, 11 1.53 relative risk; greater than 20 years, 12 1.19.</p> <p>13 So I did not see a 14 difference -- a statistically significant 15 difference in either case, but in frequency, 16 which was fairly nonspecific and few people 17 who used it less than once a week, it was 18 higher in the more frequent users.</p> <p>19 And in the range where 20 Ms. Swann is given that she had her tubes 21 tied after 15 years of use, less than 22 20 years of use in this study, the risk was 23 1.53.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. But not statistically</p>	<p style="text-align: center;">Page 649</p> <p>1 particular characteristics or do you disagree 2 with the authors' conclusion that they did 3 not find dose-response?</p> <p>4 DR. THOMPSON: Object to form. 5 A. Well, I -- two things. 6 Specifically, I disagree with Ms. Swann. As 7 far as frequency of use, I disagree with the 8 findings. There was an increased risk, 9 although it wasn't statistically significant.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. So the authors are wrong when 12 they state there was not a dose-response 13 relationship regarding frequency or duration 14 of genital powder use and ovarian cancer 15 among African American or white women per 16 your reading of this study?</p> <p>17 DR. THOMPSON: Object to form. 18 A. That is not what I said. What 19 I said was, as far as the frequency of use, I 20 disagree with that statement. There was no 21 statistical significant difference in 22 duration of use.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. So -- 25 A. I agree with that part of the</p>

Judith Wolf, M.D.

Page 650	Page 652
<p>1 statement.</p> <p>2 Q. -- you disagree with the</p> <p>3 authors with respect to frequency, but not</p> <p>4 with respect to duration, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. I believe that their findings</p> <p>7 support a difference with increased frequency</p> <p>8 and not with increased duration.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. In order to establish</p> <p>11 dose-response, do you need both frequency and</p> <p>12 duration or is just duration enough or just</p> <p>13 frequency enough?</p> <p>14 A. I think you could have one or</p> <p>15 both or -- but not -- I don't believe that</p> <p>16 you have to have both. But Ms. Swann had</p> <p>17 frequency and duration.</p> <p>18 Q. The authors -- if we look at</p> <p>19 their conclusion number 1 in the abstract,</p> <p>20 while genital powder use was more prevalent</p> <p>21 among African American women, the</p> <p>22 associations between genital powder use and</p> <p>23 ovarian cancer risk were similar across race</p> <p>24 and did not materially vary by histotype.</p> <p>25 Do you agree with that?</p>	<p>1 study.</p> <p>2 Q. And yet, in this study what the</p> <p>3 authors found is that even though African</p> <p>4 American women used talc more than white</p> <p>5 women, these authors did not find a</p> <p>6 statistically significant association in</p> <p>7 African American women, but they did in white</p> <p>8 women; is that right?</p> <p>9 DR. THOMPSON: Object to form.</p> <p>10 A. They did not find a difference</p> <p>11 between the association in African American</p> <p>12 women and white women. They found an</p> <p>13 association in both, but it was about the</p> <p>14 same.</p> <p>15 And what I'm saying is that</p> <p>16 they are different groups of women, and so</p> <p>17 just the fact that one group used more</p> <p>18 talc -- had a higher rate of use of talcum</p> <p>19 powder than the other doesn't necessarily</p> <p>20 mean that they should have more ovarian</p> <p>21 cancer or a higher risk.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. But you would expect the group</p> <p>24 of women that used more talcum powder to have</p> <p>25 a higher risk of ovarian cancer, if your</p>
<p>1 A. I agree that that was the</p> <p>2 findings in their report.</p> <p>3 Q. That's not what you would</p> <p>4 necessarily expect if talcum powder was</p> <p>5 causing ovarian cancer, correct?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. I'm going to disagree with that</p> <p>8 statement. The fact that African American</p> <p>9 women used talc more often than whites</p> <p>10 doesn't necessarily mean that talcum powder's</p> <p>11 going to cause more ovarian cancer in them,</p> <p>12 because they're different people. They have</p> <p>13 different genetic makeups. In fact, every</p> <p>14 African American or every white woman has a</p> <p>15 different genetic makeup.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. I understand that, but we're</p> <p>18 looking at them collectively in this study,</p> <p>19 correct?</p> <p>20 A. Yes.</p> <p>21 Q. And the authors acknowledge and</p> <p>22 you've acknowledged that genital powder use</p> <p>23 is more common among African American women,</p> <p>24 correct?</p> <p>25 A. 35% versus 30%, 29.5%, in this</p>	<p>1 opinions in this matter are correct, right?</p> <p>2 DR. THOMPSON: Object to form,</p> <p>3 asked and answered.</p> <p>4 A. No, that's -- that's not true.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Explain why, then, that you</p> <p>7 would not expect the group of women who used</p> <p>8 talcum powder more, why you would not expect</p> <p>9 them to have a higher rate of ovarian cancer.</p> <p>10 DR. THOMPSON: Object to form,</p> <p>11 asked and answered.</p> <p>12 THE WITNESS: So when it's been</p> <p>13 asked and answered and that's your</p> <p>14 objection, I'm not sure if I'm</p> <p>15 supposed to answer again or not.</p> <p>16 DR. THOMPSON: Yeah, you are.</p> <p>17 THE WITNESS: Okay.</p> <p>18 A. So more African American women</p> <p>19 use powder. The risk of developing ovarian</p> <p>20 cancer from powder was the same in African</p> <p>21 American and white women, or similar.</p> <p>22 Let's see. The -- the African</p> <p>23 American women was 1.22, 1.36.</p> <p>24 Just because more African</p> <p>25 American women use talc doesn't mean that</p>

Judith Wolf, M.D.

Page 654	Page 656
<p>1 they're going to get -- that the risk -- the 2 odds ratio has to be higher in them. 3 Q. Why not? 4 A. I don't know how better to 5 explain it. Why would it be? 6 Q. Because more African American 7 women use talcum powder. 8 DR. THOMPSON: Object to form, 9 same objection, asked and answered 10 numerous times. 11 BY MR. ZELLERS: 12 Q. So if you have a group of women 13 who use talcum powder more than another group 14 of women, wouldn't you expect the group of 15 women who used talcum powder more frequently, 16 that they would have a higher risk of ovarian 17 cancer if, you know, your theory and your 18 opinions are correct? 19 DR. THOMPSON: Object to form. 20 A. No. 21 DR. THOMPSON: Asked and 22 answered numerous times. 23 A. That's not what I would expect. 24 I would expect if we had genetically 25 homogeneous women that might be true, but we</p>	<p>1 identification.) 2 BY MR. ZELLERS: 3 Q. And it's an excerpt from the 4 deposition of Ms. Huston, page 53, beginning 5 at line 7. 6 DR. THOMPSON: If you want to 7 read her the passage while I'm getting 8 it up, that's fine. 9 BY MR. ZELLERS: 10 Q. Ms. Huston, Ms. Swann's 11 daughter testified that Ms. Swann's paternal 12 aunt had breast cancer, and the testimony is: 13 QUESTION: All right. On 14 page 18, under Family Medical History, we've 15 got Edna Pye Ball, paternal aunt, now 16 deceased, breast cancer. 17 I think when we were talking 18 earlier, you mentioned another aunt on your 19 dad's side. I think you told me that both 20 Mae and Annette had breast cancer; is that 21 right? 22 ANSWER: And my grandmother, my 23 paternal grandmother, yes. 24 Okay. 25 And with Edna Pye Ball, I'm</p>
<p style="text-align: center;">Page 655</p> <p>1 don't. We know that African American women 2 have a lower risk of ovarian cancer overall 3 compared to white women. 4 BY MR. ZELLERS: 5 Q. Do you know why? 6 A. Because -- do I know why? Not 7 specifically, no. 8 Q. The reason, then, that you 9 don't find it unusual, the findings in this 10 study, is because there's something about 11 African American women which we don't know 12 that makes them less susceptible to ovarian 13 cancer; is that correct? 14 DR. THOMPSON: Object to form. 15 A. Epidemiologically, that's 16 correct. 17 BY MR. ZELLERS: 18 Q. Before I get too far ahead, I 19 want to go back to family history. And I was 20 able to go back and look at the deposition. 21 And your counsel can show you what we've 22 marked or will mark as Deposition Exhibit 53. 23 (Whereupon, Deposition Exhibit 24 Wolf-53, Excerpt from Lydia Huston 25 Deposition, was marked for</p>	<p style="text-align: center;">Page 657</p> <p>1 just not sure of the date. 2 So does the reference to 3 page 18, under Family Medical History, Edna 4 Pye Ball, now deceased, breast cancer, does 5 that refresh your recollection as to 6 Ms. Swann's paternal aunt having breast 7 cancer? 8 And I'm sorry, Doctor, I don't 9 have the testimony -- 10 A. That just confused me more 11 because -- 12 Q. Let me ask you, then, a 13 hypothetical. 14 If Ms. Swann's paternal aunt 15 had breast cancer, hypothetically -- 16 A. Paternal aunt had breast 17 cancer. 18 Q. Yes. 19 A. Yes. 20 Q. Would that be information that 21 you would consider in terms of determining 22 whether family history was a risk factor in 23 her case? 24 DR. THOMPSON: Object to form. 25 A. A paternal aunt who had breast</p>

Judith Wolf, M.D.

Page 658	Page 660
<p>1 cancer, I would need more information about 2 was it premenopausal or postmenopausal, 3 because somewhere else it says it was the 4 paternal grandmother who had breast cancer -- 5 BY MR. ZELLERS: 6 Q. I understand. 7 A. -- so I'm not clear. 8 Q. That's why I'm asking you in 9 terms of a hypothetical. 10 A. I would need more information. 11 Q. All right. Is a finding that a 12 patient's paternal aunt had breast cancer, is 13 that a factor you would consider when looking 14 at family history? 15 A. I consider the entire family 16 history. One paternal aunt who had breast 17 cancer would not put a patient at increased 18 risk for ovarian cancer. 19 Q. How about a paternal aunt with 20 breast cancer and a grandmother with ovarian 21 cancer? Hypothetically, if those are the 22 facts in this case -- 23 A. What side is the grandmother 24 on? 25 Q. We looked at that record early</p>	<p>1 grandmother was a blood relative of the 2 patient -- 3 A. Well, I would assume she was, 4 unless the patient was somehow adopted. 5 Q. Right. And the paternal aunt 6 was a blood relative, so that in our 7 hypothetical -- 8 A. I would assume -- yeah. Okay. 9 So it could be -- okay. 10 Q. So assume both the paternal 11 aunt that had breast cancer and the 12 grandmother, blood relative, had ovarian 13 cancer. Would that be enough for you to 14 consider in a case the possibility of family 15 history being a risk factor for ovarian 16 cancer? 17 A. Not unless I knew that the 18 grandmother was from the same side of the 19 family as the paternal aunt, and I had more 20 information about the paternal aunt's 21 grandmother; was it premenopausal or 22 postmenopausal? 23 Q. That's what you would need in 24 terms of additional -- 25 A. To make some kind of an</p>
Page 659	Page 661
<p>1 on. We don't know. So that was an earlier 2 deposition exhibit -- 3 A. 49. 4 Q. -- 49, the record from Missouri 5 Baptist Medical Center, that the grandmother 6 had ovarian cancer. 7 A. I see that. 8 Q. So my question to you is, and 9 I'll phrase it in terms of a hypothetical, 10 that in a case if a patient has a grandmother 11 with ovarian cancer and a paternal aunt with 12 breast cancer, is that supportive of family 13 history being a risk factor or a potential 14 risk factor for ovarian cancer? 15 DR. THOMPSON: Object to form. 16 A. With that information alone, 17 that does not give me any information to 18 support a family history. The grandmother 19 could be on the maternal side, the aunt on 20 the father's side. That would have no 21 relationship. 22 BY MR. ZELLERS: 23 Q. If, hypothetically, both 24 relatives were -- well, strike that. 25 Hypothetically, if the</p>	<p>1 assessment. I'm sorry. 2 Q. That's all right. 3 That's the additional 4 information you would need to make an 5 assessment as to whether family history was a 6 potential risk factor? 7 A. Yes. 8 Q. A couple more questions. 9 Are you aware that Ms. Swann 10 had vulvar lesions while being treated with 11 chemotherapy? 12 And I can show you the record, 13 but -- 14 A. Yeah, I vaguely remember that. 15 But I don't remember the details, if you have 16 that record. 17 Q. Sure. 18 Let's mark as Deposition 19 Exhibit 54... 20 (Whereupon, Deposition Exhibit 21 Wolf-54, Medical Record(s), 22 SWANNV_ELBENDARYA_0035 - 23 SWANNV_ELBENDARYA_0036, was marked for 24 identification.) 25 ///</p>

Judith Wolf, M.D.

Page 662	Page 664
<p>1 BY MR. ZELLERS:</p> <p>2 Q. Do you see Deposition</p> <p>3 Exhibit 54, this medical record excerpt, and</p> <p>4 I'm looking at the second paragraph: On</p> <p>5 examination she has an area on the right side</p> <p>6 of the lower vulvar area near the</p> <p>7 posterior -- is that fourchette?</p> <p>8 A. Fourchette.</p> <p>9 Q. -- that is irregularly shaped.</p> <p>10 It is obviously abraded. It has the</p> <p>11 appearance of a possibility that there were</p> <p>12 several blisters that became confluent.</p> <p>13 A. I see that.</p> <p>14 Q. All right. Ms. Swann reported</p> <p>15 to a nurse practitioner that she was using</p> <p>16 cornstarch and Vaseline on her vulvar area</p> <p>17 and rectum. Are you aware of that?</p> <p>18 A. I see that there, yes.</p> <p>19 Q. The nurse practitioner told her</p> <p>20 to stop using the cornstarch; is that right?</p> <p>21 A. Yes.</p> <p>22 Q. We had looked earlier at the</p> <p>23 Wentzensen and O'Brien article from 2001</p> <p>24 [sic], and do you recall in that article that</p> <p>25 the authors also discussed cornstarch as an</p>	<p>1 inflammation, but it doesn't last -- stay</p> <p>2 there to cause chronic inflammation.</p> <p>3 Q. Is that a no to my question?</p> <p>4 DR. THOMPSON: Object to form.</p> <p>5 A. As far as I'm aware, cornstarch</p> <p>6 causes acute inflammation. It's broken down</p> <p>7 by the body, and so it wouldn't cause a</p> <p>8 chronic inflammatory response.</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Cornstarch, because of the</p> <p>11 sugars it contains, can cause yeast</p> <p>12 infections, correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. I'd have to see a paper that</p> <p>15 shows that cornstarch causes yeast</p> <p>16 infections. That's not something that I'm</p> <p>17 clinically aware of.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. Do you have the Wentzensen</p> <p>20 paper?</p> <p>21 A. I do.</p> <p>22 (Interruption by the</p> <p>23 stenographer.)</p> <p>24 (Discussion off the record.)</p> <p>25 ///</p>
<p style="text-align: center;">Page 663</p> <p>1 inflammatory agent?</p> <p>2 DR. THOMPSON: Object to form.</p> <p>3 A. I don't recall that from that</p> <p>4 paper, and I think that paper was from 2021,</p> <p>5 not 2001.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. If I said 2001, I misspoke. It</p> <p>8 was from 2021.</p> <p>9 Cornstarch can cause</p> <p>10 inflammation; is that right?</p> <p>11 A. Acute inflammation.</p> <p>12 Q. Well, cornstarch can cause</p> <p>13 either or both acute inflammation or chronic</p> <p>14 inflammation, correct?</p> <p>15 DR. THOMPSON: Object to form.</p> <p>16 A. Cornstarch can cause acute</p> <p>17 inflammation. What's not clear for me for</p> <p>18 this was, was she using cornstarch to try to</p> <p>19 treat that area, which is what I was assuming</p> <p>20 when I was reading this.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Can cornstarch cause chronic</p> <p>23 inflammation?</p> <p>24 A. Cornstarch is broken down by</p> <p>25 the body, and so it can cause acute</p>	<p style="text-align: center;">Page 665</p> <p>1 BY MR. ZELLERS:</p> <p>2 Q. Doctor, I'm looking on</p> <p>3 page 2 --</p> <p>4 A. Yes.</p> <p>5 Q. -- of the Wentzensen and</p> <p>6 O'Brien paper, 2021.</p> <p>7 A. Yes.</p> <p>8 Q. The very last sentence, page 2,</p> <p>9 under Chemical Properties of Talc and Body</p> <p>10 Powder?</p> <p>11 A. I see that.</p> <p>12 Q. The authors state: It cannot</p> <p>13 be excluded that other ingredients of body</p> <p>14 powders, such as cornstarch, may also have</p> <p>15 biological effects, for example, by causing</p> <p>16 irritation or inflammation of the female</p> <p>17 reproductive tract.</p> <p>18 Do you see that?</p> <p>19 A. I see that.</p> <p>20 Q. And you have no disagreement</p> <p>21 with that, do you?</p> <p>22 DR. THOMPSON: Object to form.</p> <p>23 A. That's what I just said before,</p> <p>24 that it can cause inflammation.</p> <p>25 ///</p>

Judith Wolf, M.D.

Page 666	Page 668
<p>1 BY MR. ZELLERS:</p> <p>2 Q. All right. Are you aware that</p> <p>3 the FDA banned cornstarch on surgical gloves</p> <p>4 because of the inflammatory responses it can</p> <p>5 cause?</p> <p>6 A. Yes. It banned any powder use</p> <p>7 on surgical gloves, I think, in the '90s.</p> <p>8 Q. You --</p> <p>9 A. Or maybe the 2000s. I don't</p> <p>10 remember the year.</p> <p>11 Q. Do you consider douching to be</p> <p>12 a risk factor for ovarian cancer?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. I do not, but I highly</p> <p>15 discourage my patients from douching.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. Why is that?</p> <p>18 A. Because it upsets the normal</p> <p>19 bacterial flora in the vagina and can</p> <p>20 increase the risk of infection.</p> <p>21 Q. Are you familiar the Sister</p> <p>22 Study, which is one of the cohort studies?</p> <p>23 A. I am.</p> <p>24 Q. And that's Gonzalez 2016, and</p> <p>25 they wrote an article, Douching, Talc Use and</p>	<p>1 A. I see that.</p> <p>2 Q. So this study found a</p> <p>3 statistically significant increased risk for</p> <p>4 ovarian cancer for douching but not for</p> <p>5 perineal talc use; is that right?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. This study -- what they asked,</p> <p>8 if you look just above the Results in their</p> <p>9 Methods: At baseline, participants were</p> <p>10 asked about douching and talc use during the</p> <p>11 previous 12 months.</p> <p>12 So that -- they only looked at</p> <p>13 that one-year period, the previous 12 months</p> <p>14 from the time they were asked.</p> <p>15 That's not enough information</p> <p>16 for me to know what any association or</p> <p>17 results that they got, what they mean from</p> <p>18 their study. And this is the only study that</p> <p>19 I'm aware of that showed any correlation</p> <p>20 between douching and ovarian cancer risk.</p> <p>21 BY MR. ZELLERS:</p> <p>22 Q. Well, they go on to say that:</p> <p>23 During follow-up, 154 participants reported a</p> <p>24 diagnosis of ovarian cancer. And the median</p> <p>25 follow-up was 6.6 years. Is that right?</p>
<p style="text-align: center;">Page 667</p> <p>1 Risk of Ovarian Cancer, correct?</p> <p>2 A. I don't remember the exact</p> <p>3 title of it.</p> <p>4 Q. Let's mark as Exhibit 55...</p> <p>5 (Whereupon, Deposition Exhibit</p> <p>6 Wolf-55, Douching, Talc Use, and Risk</p> <p>7 of Ovarian Cancer, by Gonzalez et al,</p> <p>8 was marked for identification.)</p> <p>9 BY MR. ZELLERS:</p> <p>10 Q. Have you had a chance to take a</p> <p>11 look at the article?</p> <p>12 A. Yes.</p> <p>13 Q. And it's titled Douching, Talc</p> <p>14 Use and Risk of Ovarian Cancer; is that</p> <p>15 right?</p> <p>16 A. Yes.</p> <p>17 Q. The authors found -- and I'm</p> <p>18 looking under Results in the Abstract: There</p> <p>19 was little association between baseline</p> <p>20 perineal talc use and subsequent ovarian</p> <p>21 cancer. Douching was more common among talc</p> <p>22 users, and douching at baseline was</p> <p>23 associated with increased subsequent risk of</p> <p>24 ovarian cancer.</p> <p>25 Do you see that?</p>	<p style="text-align: center;">Page 669</p> <p>1 A. Yes.</p> <p>2 Q. Do you consider douching with</p> <p>3 also using talc to be a risk factor for</p> <p>4 ovarian cancer?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. Again, I'm not aware of any</p> <p>7 studies that look at specifically the</p> <p>8 combination of those two activities other</p> <p>9 than this study, and douching is not</p> <p>10 something that -- again, I highly recommend</p> <p>11 my patients do not douche for many reasons.</p> <p>12 Not for ovarian cancer risk, but for other</p> <p>13 health reasons and infection reasons.</p> <p>14 And this is the only study that</p> <p>15 I'm aware of that found that douching was a</p> <p>16 risk for ovarian cancer. And it was a poorly</p> <p>17 designed study as far as the questions they</p> <p>18 asked and the usage of either douching or</p> <p>19 talc use.</p> <p>20 BY MR. ZELLERS:</p> <p>21 Q. Do you consider douching with</p> <p>22 also using talc to be a potential risk factor</p> <p>23 for ovarian cancer, but more information and</p> <p>24 study is needed?</p> <p>25 DR. THOMPSON: Object to form.</p>

Judith Wolf, M.D.

Page 670	Page 672
<p>1 MS. GARBER: Object to the 2 form. 3 A. I would not recommend anybody 4 do more study on douching of anything because 5 I think it's not a good thing. It's not 6 healthy for women to douche. 7 BY MR. ZELLERS: 8 Q. In Ms. Swann's case, as in the 9 other cases we've talked about, there's the 10 potential that there could be an unknown 11 cause or risk factor for ovarian cancer 12 that's related to her diagnosis of ovarian 13 cancer, correct? 14 DR. THOMPSON: Object to form. 15 MS. GARBER: Object to the 16 form. 17 A. So I reviewed all of the -- all 18 of her records and her risk factors, and 19 everything that's identified as a risk factor 20 for ovarian cancer or a protective factor I 21 assessed, and her risk factor that was clear 22 for me for ovarian cancer was her talc use. 23 BY MR. ZELLERS: 24 Q. Could you answer my question? 25 A. I don't remember your question.</p>	<p>1 BY MR. ZELLERS: 2 Q. We have the possibility of a 3 hereditary gene mutation or a gene mutation 4 that is not yet -- let me withdraw that. 5 There's the possibility of a 6 genetic gene mutation that either has not 7 been tested for or not been discovered, 8 correct? 9 MS. GARBER: Object to the 10 form. 11 A. There's nothing in her history 12 that suggests that she has any genetic 13 mutation, inherited genetic mutation. 14 BY MR. ZELLERS: 15 Q. It's a possibility, correct? 16 MS. GARBER: Object to the 17 form. 18 A. It's highly unlikely. There's 19 nothing in her history to suggest that or 20 support that. 21 BY MR. ZELLERS: 22 Q. What would you look for that 23 might be indicative or create the potential 24 for an undiscovered or undiagnosed gene 25 mutation?</p>
<p style="text-align: center;">Page 671</p> <p>1 DR. THOMPSON: Object to form. 2 BY MR. ZELLERS: 3 Q. All right. In all of these 4 cases, there's a possibility of an unknown 5 cause of ovarian cancer, either unknown or 6 undiscovered, correct? 7 DR. THOMPSON: Object to form. 8 A. In Ms. Swann's case and in all 9 of the cases that we've discussed today and 10 yesterday, Ms. Gallardo, and this case too, 11 given what I know about ovarian cancer and 12 the risks factors that are known, I think 13 it's highly unlikely that there would be 14 something else that caused -- would be a 15 cause of her ovarian cancer that was -- that 16 I did not already assess, something unknown. 17 It would be highly unlikely. 18 BY MR. ZELLERS: 19 Q. Well, we have the possibility 20 of a family history, correct? 21 MS. GARBER: Object to the 22 form. 23 DR. THOMPSON: Object to form. 24 A. I have no evidence in her 25 family history that that's a risk factor.</p>	<p style="text-align: center;">Page 673</p> <p>1 DR. THOMPSON: Object to form. 2 That's asked and answered on numerous 3 occasions. 4 A. Well, I'm not sure what you're 5 asking. Are you asking what in a family 6 history would I look for? 7 BY MR. ZELLERS: 8 Q. No. What I'm saying is there 9 are many undiscovered genetic mutations, 10 correct? I mean, that's a common fact. 11 A. That doesn't mean they're 12 inherited. There are many genetic mutations. 13 Q. Let's put aside inherited. So 14 I'm asking you -- 15 A. So not inherited. 16 Q. Not inherited. Genetic 17 mutations. 18 A. There are many genetic 19 mutations in ovarian cancer. Every ovarian 20 cancer has many, many genetic mutations by 21 the time we find it's cancer. 22 Q. Understood. 23 There may be genetic mutations 24 that are yet undiscovered, correct? 25 DR. THOMPSON: Object to form.</p>

Judith Wolf, M.D.

Page 674	Page 676
<p>1 A. There may be genetic mutations 2 that are rare that are found in some cancers. 3 That would not have any impact on my opinion 4 in this case.</p> <p>5 BY MR. ZELLERS: 6 Q. Understood. 7 In your opinion, there are no 8 other possible causes for Ms. Swann's ovarian 9 cancer other than talcum powder use; is that 10 your opinion?</p> <p>11 DR. THOMPSON: Object to form. 12 A. I'm going to go back to ovarian 13 cancer is multifactorial, and the only thing 14 that I can find in her history that is a 15 clear risk factor and a causative factor of 16 ovarian cancer is her talc use.</p> <p>17 BY MR. ZELLERS: 18 Q. We did discuss many times, and 19 neither one of us want to repeat it, but we 20 discussed many times that the majority of 21 ovarian cancers have an unknown cause, 22 correct?</p> <p>23 DR. THOMPSON: Object to form. 24 A. You have said that many times, 25 and I have said that ovarian cancer is</p>	<p>1 BY MR. ZELLERS: 2 Q. So your testimony is, in the 3 majority of cases, physicians, competent 4 physicians, can determine the cause of the 5 ovarian cancer?</p> <p>6 MS. GARBER: Object to the 7 form.</p> <p>8 DR. THOMPSON: Objection. 9 MR. ZELLERS: No. If that's 10 her testimony, I'd like to understand 11 that.</p> <p>12 DR. THOMPSON: That is not her 13 testimony.</p> <p>14 THE WITNESS: That is not my 15 testimony. 16 (Simultaneous discussion 17 interrupted by the stenographer.)</p> <p>18 DR. THOMPSON: That misstates 19 her testimony on multiple occasions. 20 A. So my testimony is that about 21 15% of ovarian cancers have a recognizable 22 inherited genetic mutation, which is a risk 23 factor. And there are multiple other risk 24 factors for ovarian cancer. Some women have 25 more than one that you can identify. Some</p>
<p>1 multifactorial, about 15% of the time there's 2 an inherited mutation. The other ones it's 3 some noninherited exposure. Things like 4 talc, endometriosis, incessant ovulation, 5 infertility, nulliparity, those are things 6 that can be causes of ovarian cancer. 7 Some women have more than one 8 of those that you can identify. Some have 9 none, some have one.</p> <p>10 Q. In the majority of cases of 11 ovarian cancer, the specific cause cannot be 12 determined. Agreed?</p> <p>13 DR. THOMPSON: Object to form. 14 BY MR. ZELLERS: 15 Q. I understand in this case you 16 believe you've determined at least a cause of 17 the ovarian cancer. My question is broader, 18 that in the majority of cases of ovarian 19 cancer, a specific cause or causes cannot be 20 determined. Agreed?</p> <p>21 MS. GARBER: Object to the 22 form.</p> <p>23 DR. THOMPSON: Object to form. 24 A. I don't agree with that 25 statement.</p>	<p>1 have one. Some have none. 2 BY MR. ZELLERS: 3 Q. And my question to you is: Do 4 you agree that in the majority of cases of 5 ovarian cancer, a specific cause cannot be 6 determined?</p> <p>7 DR. THOMPSON: Object to form. 8 A. I'm going to give you the same 9 answer I just gave you; that women -- some 10 women with ovarian cancer have a known 11 inherited mutation that increases their risk. 12 BY MR. ZELLERS: 13 Q. And we've agreed that's 10 to 14 15%, correct? 15 A. Yes. 16 Q. All right. And so my question 17 is: In the majority of cases, putting aside 18 the 10 to 15% where there is, you know, a 19 known hereditary genetic mutation, putting 20 those aside, in the other 85% of cases, the 21 majority of cases, we don't know what causes 22 a particular woman's ovarian cancer.</p> <p>23 DR. THOMPSON: Object to form, 24 asked and answered. 25 A. My answer is that in many of</p>

Judith Wolf, M.D.

Page 678	Page 680
<p>1 the other women who don't have an inherited 2 genetic mutation, you can identify one or 3 more risk factors that can be a cause of her 4 cancer.</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. Can be, but you don't know if 7 they are or are not, correct?</p> <p>8 DR. THOMPSON: Object to form, 9 asked and answered.</p> <p>10 A. A genetic mutation can be a 11 cause of her cancer. If she doesn't have a 12 genetic mutation and has another risk factor, 13 that can be a cause of her cancer.</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. Most cases of ovarian cancer 16 are sporadic; is that right?</p> <p>17 DR. THOMPSON: Object to form.</p> <p>18 MS. GARBET: Object to the 19 form.</p> <p>20 A. Sporadic means not inherited, 21 most of the time in the medical literature. 22 That doesn't mean you don't know what the 23 cause of it could be.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. Then let me ask you this</p>	<p>1 replacement therapy, could have age, could 2 have a number of risk factors, could be 3 BRCA-positive, but that doesn't necessarily 4 mean that any one or combination of those 5 things caused her ovarian cancer, correct?</p> <p>6 MS. GARBET: Object to the 7 form.</p> <p>8 DR. THOMPSON: Object to form, 9 asked and answered. I think we're 10 about up to 30.</p> <p>11 A. I don't even know what that 12 question was. I got confused. I'm sorry. 13 So that...</p> <p>14 BY MR. ZELLERS:</p> <p>15 Q. Well, the question is: You've 16 agreed that just because a woman has a risk 17 factor does not mean that that risk factor is 18 going to cause the woman to have ovarian 19 cancer, correct?</p> <p>20 DR. THOMPSON: Object to form, 21 again.</p> <p>22 A. So a risk factor doesn't have 23 to cause cancer, but if a woman has cancer 24 and she has a known risk factor, I consider 25 that a cause of her cancer.</p>
<p>1 question, and if you can answer it, I'll be 2 off of this topic.</p> <p>3 Is it your opinion that in the 4 majority of cases of ovarian cancer, that you 5 can determine what caused the ovarian cancer?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. It is my opinion that in many 8 women you can -- you or anyone can identify 9 risk factors that could cause her cancer.</p> <p>10 BY MR. ZELLERS:</p> <p>11 Q. Risk factors are not cause. 12 We've discussed that a number of times, 13 correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. So a risk factor can cause.</p> <p>16 BY MR. ZELLERS:</p> <p>17 Q. It can or cannot. I mean, it 18 could be either one, right?</p> <p>19 DR. THOMPSON: Object to form.</p> <p>20 A. A causative risk factor -- a 21 risk factor can cause, increases the risk.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. It increases the risk, but 24 we've talked about a woman could have a 25 family history, a woman could have hormone</p>	<p>1 BY MR. ZELLERS:</p> <p>2 Q. That's the way you've analyzed 3 the cases and that's the basis on which 4 you're giving opinions in this case, correct?</p> <p>5 A. The basis of my opinions is by 6 reviewing all of the records to see what the 7 risk factors were, to see if there's -- if it 8 fits a known risk factor that could be a 9 cause.</p> <p>10 Remember, there's multiple 11 injuries to the cell that need to lead to 12 ovarian cancer, so she can have more than one 13 to cause her cancer.</p> <p>14 Q. The way you approached these 15 cases is that if a woman has ovarian cancer 16 and has a recognized risk factor, then you 17 believe that the risk factor or factors that 18 a woman may have are a cause of her ovarian 19 cancer, correct?</p> <p>20 DR. THOMPSON: Object to form.</p> <p>21 A. That is partly how I assess 22 these cases.</p> <p>23 BY MR. ZELLERS:</p> <p>24 Q. And that's why, for a woman 25 that has ovarian cancer and has what you</p>

Judith Wolf, M.D.

Page 682	Page 684
<p>1 determine to be sufficient exposure to talcum 2 powder, you believe that whether talc is 3 found in the tissue or not, that talcum 4 powder use is a causative factor of the 5 woman's ovarian cancer, correct?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. If I review the entire history 8 and everything and I assess that talcum use 9 was sufficient, that she had a patent 10 reproductive tract, that her type of ovarian 11 cancer is the type of ovarian cancer, 12 epithelial, that is associated with talc use, 13 in the cases that we've talked about today, I 14 have assessed that those are -- it's a cause 15 of their cancer.</p> <p>16 MR. ZELLERS: All right. So 17 let's take a break. I may have one or 18 two other questions, but I'm 19 essentially done.</p> <p>20 (Recess taken, 3:37 p.m. to 21 3:49 p.m. CDT)</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. Dr. Wolf, in Ms. Swann's case, 24 have you spoken with -- and maybe I've asked 25 you this already -- have you spoken with any</p>	<p>1 least 5 to 10 genetic mutations; is that 2 right?</p> <p>3 A. My testimony is that there has 4 to be multiple mutations, and on average, for 5 epithelial cancers in humans in adults, it's 6 5 to 10.</p> <p>7 Q. Do you agree that in any 8 woman's case, and specifically the four 9 patients we've talked today, today and 10 yesterday, Ms. Gallardo, Bondurant, Judkins 11 and Swann, that you do not know what caused 12 those 5 to 10 mutations that resulted in 13 their ovarian cancer, correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. So I know that they all had 16 significant talc use and that can cause 17 mutations, one or more. And some of them -- 18 and I can't remember all of the details -- 19 had other risk factors that could cause an 20 inflammatory response and cause mutations.</p> <p>21 The only time that I would be 22 able to say one thing caused one of those 23 mutations is if there was an inherited risk 24 factor in a BRCA mutation or some other 25 inherited risk factors that would be one of</p>
<p>1 of her treating physicians?</p> <p>2 A. I have not.</p> <p>3 Q. Is this the case in which one 4 of your former residents was a treating 5 physician, or that was Judkins?</p> <p>6 A. That was Judkins, one of my 7 former fellows.</p> <p>8 Q. So let me ask my questions for 9 Swann.</p> <p>10 In Ms. Swann's case, have you 11 spoken with her daughter at all?</p> <p>12 A. No.</p> <p>13 Q. Have you spoken with any of the 14 treating physicians in Ms. Swann's case about 15 her medical history or ovarian cancer 16 diagnosis?</p> <p>17 A. No.</p> <p>18 Q. You never were a treating 19 physician with respect to Ms. Swann?</p> <p>20 A. No.</p> <p>21 Q. Never participated in her care; 22 is that right?</p> <p>23 A. That's correct, I have not.</p> <p>24 Q. Your testimony is that for 25 ovarian cancer to occur, there has to be at</p>	<p>1 those.</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. If we had an inherited risk 4 factor in any of these four cases or in any 5 of the cases that you reviewed, you could 6 definitively say that that inherited risk 7 factor caused one or more of the mutations?</p> <p>8 A. One. It can only cause one.</p> <p>9 Q. All right. Caused one of the 10 mutations.</p> <p>11 A. Yes.</p> <p>12 Q. However, for all other risk 13 factors, including talc, you can't say 14 definitively in any case that a specific risk 15 factor caused a genetic mutation, one of the 16 5 to 10 that are required for a woman to 17 develop ovarian cancer, correct?</p> <p>18 DR. THOMPSON: Object to form, 19 asked and answered.</p> <p>20 A. I disagree with that 21 clarification. I would say that I can't tell 22 you which mutations were caused by other risk 23 factors, but I know that they can cause 24 mutations.</p> <p style="text-align: center;">///</p>

Judith Wolf, M.D.

Page 686	Page 688
<p>1 BY MR. ZELLERS:</p> <p>2 Q. But you can't tell, of the 5 to</p> <p>3 10 mutations, which one or more were caused</p> <p>4 by talcum powder use, correct?</p> <p>5 DR. THOMPSON: Object to form.</p> <p>6 A. It doesn't matter to me which</p> <p>7 one or more.</p> <p>8 BY MR. ZELLERS:</p> <p>9 Q. Well, you can't tell if any of</p> <p>10 the genetic mutations were caused by talcum</p> <p>11 powder use, correct?</p> <p>12 DR. THOMPSON: Object to form,</p> <p>13 asked and answered.</p> <p>14 A. I know that talcum powder use</p> <p>15 can cause mutations and can cause ovarian</p> <p>16 cancer.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. I understand that's your</p> <p>19 opinion. My question is a little different.</p> <p>20 In any individual patient,</p> <p>21 you're not able to say whether the talcum</p> <p>22 powder use caused one or two or more of the 5</p> <p>23 to 10 mutations required for ovarian cancer</p> <p>24 or that the talcum powder use caused any</p> <p>25 genetic mutation, correct?</p>	<p>1 any risk factor, correct?</p> <p>2 A. It's -- it's difficult to do</p> <p>3 that.</p> <p>4 MR. ZELLERS: All right. I</p> <p>5 have no further questions, other</p> <p>6 than -- I'll wait until Ms. Thompson</p> <p>7 is done. I just want to say we have</p> <p>8 covered all your opinions, but I'll do</p> <p>9 that when Ms. Thompson is done.</p> <p>10 DR. THOMPSON: Okay. Did you</p> <p>11 want to look at the CV while she's</p> <p>12 here?</p> <p>13 MR. ZELLERS: Oh, thank you.</p> <p>14 Thank you so much.</p> <p>15 DR. THOMPSON: Anytime, for</p> <p>16 you.</p> <p>17 MR. ZELLERS: All right. Yes.</p> <p>18 BY MR. ZELLERS:</p> <p>19 Q. So we've marked the CV --</p> <p>20 MR. ZELLERS: Have we marked</p> <p>21 the CV?</p> <p>22 All right. The CV we will mark</p> <p>23 as Deposition Exhibit 56.</p> <p>24 (Whereupon, Deposition Exhibit</p> <p>25 Wolf-56, Curriculum Vitae, was marked</p>
<p style="text-align: center;">Page 687</p> <p>1 DR. THOMPSON: Object to form,</p> <p>2 asked and answered.</p> <p>3 BY MR. ZELLERS:</p> <p>4 Q. I mean, that's just not</p> <p>5 something that's knowable and you're not able</p> <p>6 to give an opinion on that.</p> <p>7 DR. THOMPSON: Object to form.</p> <p>8 A. So if I have an ovarian cancer</p> <p>9 and I can see all of the genetic mutations in</p> <p>10 that ovarian cancer, it's very difficult to</p> <p>11 know where those came from unless there is</p> <p>12 one of those mutations that she has that came</p> <p>13 from an inherited mutation.</p> <p>14 But by the time there's a</p> <p>15 cancer, there isn't just 5 or 10 that you can</p> <p>16 see that I would assess, there's hundreds.</p> <p>17 And I'm telling you that because I've looked</p> <p>18 at the karyotypes of ovarian cancers and you</p> <p>19 can see multiple genetic mutations, not just</p> <p>20 5 or 10, that led to cancer. Once it's</p> <p>21 cancer, it keeps mutating.</p> <p>22 BY MR. ZELLERS:</p> <p>23 Q. Other than in the case of an</p> <p>24 inherited genetic mutation, you're not able</p> <p>25 to attribute a particular genetic mutation to</p>	<p style="text-align: center;">Page 689</p> <p>1 for identification.)</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. I'm not able to see it</p> <p>4 because -- well, I don't need to see it.</p> <p>5 That's okay.</p> <p>6 A. Yeah.</p> <p>7 Q. You have it electronically in</p> <p>8 front of you; is that right?</p> <p>9 A. I do. I do.</p> <p>10 Q. So we're going to print a copy.</p> <p>11 My understanding, that is your CV as of</p> <p>12 January 5th of 2019; is that right?</p> <p>13 A. Well, I added in my change of</p> <p>14 position since then.</p> <p>15 Q. All right. So the CV that</p> <p>16 you're looking at has a date of January 5th</p> <p>17 of 2019, but you updated it some since</p> <p>18 that -- since then, even if you haven't</p> <p>19 changed the date?</p> <p>20 A. Yes.</p> <p>21 Q. Okay.</p> <p>22 A. Just with my change in jobs,</p> <p>23 yes.</p> <p>24 Q. Is your CV that we've marked as</p> <p>25 Deposition Exhibit 56 an up-to-date résumé or</p>

Judith Wolf, M.D.

Page 690	Page 692
<p>1 listing of your background and your training 2 and your publications and your work 3 experience?</p> <p>4 A. Pretty much. I do think there 5 may be one or two other publications that are 6 not on there that I haven't pulled out, but 7 generally, yes.</p> <p>8 Q. When do you believe you last 9 updated your CV?</p> <p>10 A. Well, yesterday I changed the 11 position, but I did not do a PubMed search to 12 find new publications. I'm aware there have 13 been a few, but I haven't put them on.</p> <p>14 Q. So you updated it yesterday. 15 You think and believe and are testifying it's 16 up to date, other than there may be one or 17 two publications over the last year or two 18 that are not, you know, on your CV?</p> <p>19 A. Yes.</p> <p>20 Q. Those publications have nothing 21 to do with talcum powder or causes of ovarian 22 cancer or risk factors for ovarian cancer, 23 correct?</p> <p>24 A. They do not.</p> <p>25 MR. ZELLERS: All right. I</p>	<p>1 BY DR. THOMPSON: 2 Q. Well, I'm seeing now that -- 3 yeah, Table 1. 4 A. Table 1, that's on page 52. 5 Q. You know, what I'm looking at 6 may be in the supplemental tables. 7 A. They're in the back of this 8 one. 9 (Document review.)</p> <p>10 BY DR. THOMPSON: 11 Q. I'm not seeing what I'm looking 12 for, so let's just move on. 13 A. Okay. 14 Q. I may come back to that in a 15 second, but... 16 Were all the plaintiffs that we 17 are discussing today frequent users? 18 A. They were. 19 Q. Were there letters to the 20 editor published in JAMA regarding the 21 O'Brien study? 22 A. Yes. 23 Q. And what were -- what was the 24 gist of those letters? 25 MR. ZELLERS: Objection, form.</p>
Page 691	Page 693
<p>1 have no further questions then, 2 subject to maybe a couple more once 3 Ms. Thompson is done.</p> <p>4 THE WITNESS: Okay. Thank you.</p> <p>5 -----</p> <p>6 EXAMINATION</p> <p>7 -----</p> <p>8 BY DR. THOMPSON:</p> <p>9 Q. Dr. Wolf, I have just a few 10 questions. We'll start with some that are 11 more general.</p> <p>12 Looking at the O'Brien paper 13 that's Exhibit 20.</p> <p>14 A. Got it.</p> <p>15 Q. And did the O'Brien authors 16 look at frequent users of talc?</p> <p>17 MR. ZELLERS: Objection, form.</p> <p>18 A. I'm going to pull up -- look at 19 their -- so they looked at...</p> <p>20 MR. ZELLERS: Doctor, if you 21 could tell us what page you're looking 22 at, once you start to read and are 23 testifying.</p> <p>24 THE WITNESS: Yes, I will.</p> <p>25 ///</p>	<p>1 BY DR. THOMPSON: 2 Q. What -- state what those 3 letters said.</p> <p>4 MR. ZELLERS: Objection, form.</p> <p>5 A. So there were, I believe, a 6 couple of letters that said that -- brought 7 out points that there still may not have been 8 enough patients in the study to make a clear 9 judgment that there was a positive 10 association with talc use and ovarian cancer; 11 that how they assessed -- and that 12 specifically in the serous cancers, because 13 there were more of those, there was a 14 statistically increased use, and that the -- 15 that's what I recall about... 16 BY DR. THOMPSON: 17 Q. Do you remember who wrote those 18 letters? 19 A. I remember Dr. Cramer was one 20 of the authors who wrote those letters. I 21 don't remember the others. 22 Q. Was Dr. Harlow one of those 23 authors too? 24 A. Yes, Dr. Harlow. 25 Q. And are those authors of some</p>

Judith Wolf, M.D.

Page 694	Page 696
<p>1 of the other papers that we've been 2 discussing? 3 A. Absolutely, yes. 4 Q. And were those letters 5 consistent with the opinions that you've 6 given regarding the O'Brien study? 7 MR. ZELLERS: Objection, form. 8 A. There -- they brought up points 9 in their letters that I -- that are 10 consistent with my opinion. 11 BY DR. THOMPSON: 12 Q. Do you remember the questions 13 that Mr. Zellers asked regarding the subtypes 14 of ovarian cancer and Health Canada's 15 conclusions? 16 A. Yes. 17 Q. And what does Health Canada 18 assessment conclude about the causation of 19 genital talcum powder use and ovarian cancer? 20 MR. ZELLERS: Objection, form. 21 A. That it's -- the conclusions of 22 Health Canada that talcum powder can cause 23 ovarian cancer. 24 BY DR. THOMPSON: 25 Q. And did Health Canada</p>	<p>1 that you included the strengths and not the 2 weaknesses? 3 A. I included the conclusions, not 4 strengths or weaknesses. 5 Q. Do you remember the series of 6 articles about endometriosis? 7 A. Yes. 8 Q. I believe at one point you said 9 you were not an expert in endometriosis. 10 What did you mean by that 11 statement? 12 A. Well, what I meant by that 13 statement is, in my day-to-day practice, I 14 don't medically manage endometriosis, but I 15 certainly have training in endometriosis, 16 being a board certified obstetrician 17 gynecologist. 18 And I certainly take care of 19 women who have endometriosis, because if they 20 have to have surgical extirpation, removal of 21 their female organs in order to manage their 22 endometriosis, oftentimes those patients are 23 sent to someone like me, a gynecologic 24 oncologist, because the endometriosis causes 25 such scarring that the surgeries can be very</p>
Page 695	Page 697
<p>1 assessment exclude clear-cell carcinoma? 2 A. It did not. 3 MR. ZELLERS: Objection. 4 BY DR. THOMPSON: 5 Q. Did the Health Canada 6 assessment exclude endometrioid cancer? 7 MR. ZELLERS: Objection, form. 8 A. It did not. 9 BY DR. THOMPSON: 10 Q. Did the Health Canada 11 assessment exclude any epithelial ovarian 12 cancers? 13 A. It did not. 14 Q. Dr. Zellers asked you about 15 including the strengths of the Health Canada 16 assessment in your report and not the 17 weaknesses. 18 Do you remember those 19 questions? 20 A. I do. 21 Q. Is that what you did? 22 A. I included the conclusions of 23 the Health Canada report in my report, expert 24 report. 25 Q. So that would be inaccurate,</p>	<p>1 difficult and risky and most gynecologists 2 are not comfortable operating on them. 3 So although I don't medically 4 treat them and I'm not usually the one who 5 does the diagnosis, although sometimes I find 6 it when I operate on women, I do take care of 7 endometriosis and -- and, therefore, have 8 clinical expertise in the area. 9 Q. What are the generally accepted 10 signs and symptoms of endometriosis? 11 A. The most common and generally 12 accepted are chronic pelvic pain, generally 13 around the time of menses or periods, 14 dyspareunia, which is pain with intercourse, 15 and infertility. 16 Q. Is a fibrocystic breast 17 condition a sign of endometriosis? 18 A. No. It's quite common changes 19 in breasts that women have. I think some 20 reports are the vast majority of women have 21 fibrocystic changes in their breasts. 22 Q. And do you remember seeing in 23 the article that Mr. Zellers showed us that 24 90% of women have fibrocystic changes in the 25 breast?</p>

Judith Wolf, M.D.

Page 698	Page 700
<p>1 A. Yes. As I said, the vast 2 majority. 3 Q. Are endometrial polyps a risk 4 for ovarian cancer? 5 A. No. 6 Q. Is a previous cesarean section 7 generally recognized as a risk factor for 8 endometriosis? 9 A. No. 10 Q. And I believe the article that 11 Mr. Zellers showed you described one 12 additional case of endometriosis every 325 13 women who had a cesarean section. 14 Did you see that? 15 A. Yes. But having a cesarean 16 section is not generally considered a risk 17 factor for endometriosis. 18 Q. Is having a cesarean section a 19 risk factor for ovarian cancer? 20 A. No. 21 Q. Is chronic low back pain a 22 common symptom of endometriosis? 23 A. No. 24 Q. Is the use of a soy supplement 25 a risk factor for ovarian cancer?</p>	<p>1 who I do know is a good doctor, did not see 2 any endometriosis and that two pathologists 3 saw no evidence of endometriosis. 4 So I would need to see what 5 that would be before it would have any impact 6 on my opinion. 7 BY DR. THOMPSON: 8 Q. I think you talked some about 9 the -- the amount and the circumstances 10 around the talcum powder exposure that could 11 lead you to question whether the talcum 12 powder use was a contributing factor. 13 Are there any other types of 14 pelvic cancer that you would feel like you 15 had insufficient evidence to author a 16 causation opinion for? 17 MR. ZELLERS: Objection, form. 18 A. I'm not sure what you're 19 asking. 20 BY DR. THOMPSON: 21 Q. Are there other types of 22 cancer, pelvic cancers, that you would -- 23 sorry. 24 Are there types -- let's not do 25 other types. Are there types of pelvic</p>
Page 699	Page 701
<p>1 A. No. 2 Q. Did Ms. Gallardo have 3 endometriosis, in your opinion? 4 A. No. She had none of the 5 symptoms of endometriosis. She had the 6 way -- she had surgery, how you would 7 diagnose endometriosis, and her surgeon 8 saw -- reported no evidence of endometriosis. 9 And she had pathology reviewed 10 by the pathologist where she had the surgery 11 and by Dr. Godleski, and neither one of them 12 saw any evidence of endometriosis. Nothing 13 in her history or her findings or her report 14 indicated that she had endometriosis. 15 Q. If Johnson & Johnson would 16 bring to you new evidence that Ms. Gallardo 17 did, in fact, have endometriosis, would that 18 change your opinion as to whether talcum 19 powder is a cause, a contributing cause of 20 her ovarian cancer? 21 MR. ZELLERS: Objection, form. 22 A. The first thing I would need to 23 do with any new evidence would be review it 24 and see what it said. It would be hard for 25 me to imagine that her surgeon, Dr. Mutch,</p>	<p>1 cancer that you would not give a causation 2 opinion on, even with sufficient use of 3 talcum powder? 4 MR. ZELLERS: Objection, form. 5 A. So I would not give an opinion 6 that talcum powder use caused vulvar cancer 7 or cervix cancer or anal cancer or colon 8 cancer. 9 Is that what you're asking? 10 BY DR. THOMPSON: 11 Q. That was. Sorry. Not a very 12 good question. 13 And why would that be? 14 A. I have no evidence 15 epidemiologically or otherwise that talcum 16 powder causes those cancers. 17 Q. And are there other types of 18 actual ovarian cancer that you would put in 19 that same category? 20 A. Yeah. I believe I've stated 21 before that there's no evidence and I would 22 not give an opinion that talcum powder use 23 caused germ cell tumors of the ovary or 24 stromal tumors of the ovary or cancer 25 from somewhere else that was metastatic to</p>

Judith Wolf, M.D.

Page 702	Page 704
<p>1 the ovary, such as colon cancer or breast 2 cancer, which are cancers that commonly go to 3 the ovary.</p> <p>4 Q. You reviewed Ms. Gallardo's and 5 Mr. Gallardo's testimony about 6 Ms. Gallardo's -- now I'm having trouble -- 7 talcum powder use, didn't you?</p> <p>8 You reviewed their deposition 9 testimony about Ms. Gallardo's talcum powder 10 use, didn't you?</p> <p>11 A. Yes, I did.</p> <p>12 Q. Did you find their testimony to 13 be credible and reliable?</p> <p>14 MR. ZELLERS: Objection, form.</p> <p>15 A. I did. They were under oath 16 and they were consistent in what their 17 reports were with her use, and I found them 18 to be credible.</p> <p>19 BY DR. THOMPSON:</p> <p>20 Q. And would that be true for all 21 of the plaintiffs that we've discussed today 22 or their representative?</p> <p>23 MR. ZELLERS: Objection, form.</p> <p>24 A. In their depositions, I would 25 find them to be credible.</p>	<p>1 BY DR. THOMPSON: 2 Q. The gold standard for 3 diagnosing endometriosis is surgery. 4 That's what you've been telling 5 us throughout these two days, correct?</p> <p>6 A. Yes.</p> <p>7 Q. So this paper would agree with 8 your statement to that effect, correct?</p> <p>9 MR. ZELLERS: Objection, form.</p> <p>10 A. Yes.</p> <p>11 BY DR. THOMPSON:</p> <p>12 Q. And it says: In the present 13 study, we assessed the risk of gynecologic 14 cancers among women with a surgical diagnosis 15 of endometriosis.</p> <p>16 So this paper used only 17 surgically diagnosed endometriosis for their 18 odds ratios; is that right?</p> <p>19 A. That's correct.</p> <p>20 Q. Did Ms. Bondurant have any 21 surgical confirmation of her endometriosis?</p> <p>22 A. No.</p> <p>23 Q. So this article would not apply 24 to Ms. Bondurant's case; she would not have 25 been included, right?</p>
Page 703	Page 705
<p>1 BY DR. THOMPSON: 2 Q. You were asked quite a few 3 questions about the one we can't pronounce, 4 the Saavalainen paper regarding ovarian 5 endometriosis and the risk of gynecological 6 cancer.</p> <p>7 Do you remember that?</p> <p>8 A. Yes.</p> <p>9 Q. I'm going to read from the 10 second page, paragraph: The gold standard --</p> <p>11 MR. ZELLERS: I'm sorry. Which 12 study are we looking at now?</p> <p>13 DR. THOMPSON: Saavalainen. 14 And it's Exhibit 37, if you want to 15 pull it up.</p> <p>16 MR. ZELLERS: And which -- 17 where are you reading from on this?</p> <p>18 DR. THOMPSON: I'm reading from 19 the second page of the article, and it 20 is page 2.</p> <p>21 MR. ZELLERS: Yes. Right 22 column or left column?</p> <p>23 DR. THOMPSON: Left column, 24 first full paragraph, that begins with 25 "The gold standard."</p>	<p>1 MR. ZELLERS: Objection, form. 2 A. She would not have been 3 included in this kind of study.</p> <p>4 BY DR. THOMPSON: 5 Q. And obviously, Gallardo, 6 because she didn't have any kind of 7 endometriosis in your reports?</p> <p>8 A. She had surgical confirmation 9 of no evidence of endometriosis.</p> <p>10 Q. Did the Davis study -- you can 11 pull that out if you want, but I'm just going 12 to ask a question.</p> <p>13 Did the Davis study look at 14 both dose -- I'm sorry. Start all over.</p> <p>15 Did the Davis study look at 16 dose-response with both duration and 17 frequency of use?</p> <p>18 A. No, they looked at it 19 separately, not together.</p> <p>20 Q. Did you have that information, 21 both duration and frequency, with each of 22 these four plaintiffs that we've discussed 23 today?</p> <p>24 MR. ZELLERS: Objection, form.</p> <p>25 A. I did. I had the frequency of</p>

Judith Wolf, M.D.

Page 706	Page 708
<p>1 their use and the timing and the length of 2 their use.</p> <p>3 BY DR. THOMPSON:</p> <p>4 Q. Is it your opinion -- first of 5 all, one question: Were there other study -- 6 cellular studies other than the -- Dr. Saed's 7 lab that showed malignant transformation with 8 talc exposure of ovarian cells in culture?</p> <p>9 MR. ZELLERS: Objection, form.</p> <p>10 A. Yes. The Buz'Zard study. 11 (Clarification requested by the 12 stenographer.)</p> <p>13 THE WITNESS: B-U-Z-Z-A-R-D, 14 and there's an apostrophe somewhere in 15 there.</p> <p>16 BY DR. THOMPSON:</p> <p>17 Q. Is it your opinion that talcum 18 powder use is a substantial and direct 19 contributing factor in causing Ms. Gallardo's 20 ovarian cancer?</p> <p>21 A. Yes.</p> <p>22 Q. And, in other words, that's a 23 cause of her ovarian cancer?</p> <p>24 A. Yes.</p> <p>25 Q. Based on the evidence in</p>	<p>1 given to a reasonable degree of medical and 2 scientific certainty?</p> <p>3 A. They are.</p> <p>4 Q. If there is new information 5 regarding your general opinions, would it be 6 your plan to amend your report, if indicated?</p> <p>7 A. Yes.</p> <p>8 Q. If there were any new 9 information regarding the individual 10 plaintiffs, would your plan be to review and 11 amend your report, if indicated?</p> <p>12 A. Yes.</p> <p>13 Q. And would this include 14 reviewing the defense expert reports?</p> <p>15 A. Yes.</p> <p>16 Q. And you, I think, testified 17 that you diagnose endometriosis on occasion?</p> <p>18 A. Yes.</p> <p>19 Q. And that you would consider 20 yourself an expert in the -- in endometriosis 21 in women?</p> <p>22 A. Yes.</p> <p>23 DR. THOMPSON: I have no 24 further questions.</p> <p>25 MR. ZELLERS: Just a couple of</p>
<p style="text-align: center;">Page 707</p> <p>1 Ms. Gallardo's case, is there any evidence of 2 an unknown genetic mutation?</p> <p>3 A. No.</p> <p>4 Q. Is there any evidence of an 5 undiagnosed endometriosis?</p> <p>6 A. No.</p> <p>7 Q. And is it your testimony that 8 the talcum powder use of all four of these 9 plaintiffs was a cause of their ovarian 10 cancers?</p> <p>11 A. Yes.</p> <p>12 Q. Were -- have you been presented 13 with anything by Mr. Zellers in the last 14 couple of days that would cause you to change 15 any of your general opinions?</p> <p>16 A. No.</p> <p>17 Q. Have you been presented with 18 anything over these last two days that would 19 cause you to change any of your case-specific 20 opinions?</p> <p>21 A. No.</p> <p>22 Q. Do you stand by all of the 23 opinions that are contained in your reports?</p> <p>24 A. I do.</p> <p>25 Q. And are all these opinions</p>	<p style="text-align: center;">Page 709</p> <p>1 follow-up questions.</p> <p>2 -----</p> <p>3 EXAMINATION</p> <p>4 -----</p> <p>5 BY MR. ZELLERS:</p> <p>6 Q. First, with respect to 7 Ms. Bondurant and whether or not she would 8 have fit within the Saavalainen study, we 9 don't know, correct?</p> <p>10 I mean, in the -- if there was 11 evidence of a surgical diagnosis of 12 endometriosis, then she would be included in 13 the study, correct?</p> <p>14 DR. THOMPSON: Object to form.</p> <p>15 A. But there wasn't a surgical 16 diagnosis of endometriosis.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Well, you have not seen it. 19 That doesn't mean it doesn't exist, correct?</p> <p>20 A. There is nothing in her history 21 that indicated that she had a surgery that 22 diagnosed endometriosis.</p> <p>23 Q. So --</p> <p>24 A. So she would not fit into this 25 study. She would not have been included in</p>

Judith Wolf, M.D.

Page 710	Page 712
<p>1 this study.</p> <p>2 Q. And that -- the basis for that</p> <p>3 statement is that you have not seen anything</p> <p>4 indicating that she had a surgical diagnosis</p> <p>5 of endometriosis, correct?</p> <p>6 DR. THOMPSON: Object to form.</p> <p>7 A. She --</p> <p>8 DR. THOMPSON: Misstates her</p> <p>9 testimony.</p> <p>10 A. There's nothing in her history</p> <p>11 where she had any surgery that diagnosed</p> <p>12 endometriosis.</p> <p>13 BY MR. ZELLERS:</p> <p>14 Q. The Health Canada study, where</p> <p>15 in the Health Canada study does Health Canada</p> <p>16 reach a conclusion that clear-cell ovarian</p> <p>17 cancer is causally related to talcum powder</p> <p>18 use?</p> <p>19 MS. GARBER: Object to the</p> <p>20 form.</p> <p>21 DR. THOMPSON: Object to form.</p> <p>22 A. They reach a conclusion that</p> <p>23 ovarian cancer is causally related to talcum</p> <p>24 powder use, and they did not exclude any of</p> <p>25 the subtypes.</p>	<p>1 the analyses limited and likely underpowered</p> <p>2 (low sample sizes).</p> <p>3 Furthermore, there's</p> <p>4 considerable uncertainty for how subgroup</p> <p>5 data should be examined, in particular for</p> <p>6 the tumor subtypes.</p> <p>7 That's what Health Canada</p> <p>8 concludes, right?</p> <p>9 DR. THOMPSON: Object to form.</p> <p>10 A. That's not a conclusion. And</p> <p>11 the very next sentence says: Therefore,</p> <p>12 subgroup analysis will not be further</p> <p>13 examined.</p> <p>14 That doesn't mean they excluded</p> <p>15 the clear-cells and endometrioid and other</p> <p>16 subtypes.</p> <p>17 BY MR. ZELLERS:</p> <p>18 Q. Okay. Please show me where in</p> <p>19 Health Canada the Health Canada review and</p> <p>20 assessment concludes and states that there is</p> <p>21 a causal relationship between talcum powder</p> <p>22 use and clear-cell ovarian cancer.</p> <p>23 DR. THOMPSON: Object to form.</p> <p>24 A. I am saying that it concludes</p> <p>25 that there is a risk of talcum powder</p>
<p>1</p> <p>2 BY MR. ZELLERS:</p> <p>3 Q. Well, they certainly do. I</p> <p>4 mean, do you have Health Canada in front of</p> <p>5 you?</p> <p>6 THE WITNESS: Do you remember</p> <p>7 which number it is?</p> <p>8 THE STENOGRAPHER: 26 rings a</p> <p>9 bell.</p> <p>10 THE WITNESS: That's looking</p> <p>11 correct.</p> <p>12 A. I have it in front of me.</p> <p>13 BY MR. ZELLERS:</p> <p>14 Q. All right. Health Canada, the</p> <p>15 report, the risk assessment, April 2021,</p> <p>16 concludes that the epidemiology for the</p> <p>17 subtypes is inconsistent and underpowered; is</p> <p>18 that right?</p> <p>19 And I'm looking at page 17 at</p> <p>20 the bottom, Health Canada reports tumor</p> <p>21 subtypes are one of the many subgroup</p> <p>22 analyses conducted in several of the</p> <p>23 epidemiology studies and review; however,</p> <p>24 there was very little consistency in whether</p> <p>25 or how the subgroup analyses were conducted</p> <p>across the available studies, thereby leaving</p>	<p>1 and ovarian -- epithelial ovarian cancer, and</p> <p>2 they did not exclude clear-cell and</p> <p>3 endometrioid.</p> <p>4 What they did not do is look at</p> <p>5 those subgroups separately.</p> <p>6 BY MR. ZELLERS:</p> <p>7 Q. Nowhere in the Health Canada</p> <p>8 report does it specifically or expressly say</p> <p>9 that Health Canada concluded that there was a</p> <p>10 causal association between talcum powder use</p> <p>11 and clear-cell carcinoma, ovarian cancer,</p> <p>12 correct?</p> <p>13 DR. THOMPSON: Object to form.</p> <p>14 A. What it says is that there's an</p> <p>15 association of talcum powder use and</p> <p>16 epithelial ovarian cancer, and the studies</p> <p>17 that they looked at included all types of</p> <p>18 epithelial ovarian cancer; and, therefore,</p> <p>19 clear-cell and endometrioid are in that.</p> <p>20 They don't say that clear-cell</p> <p>21 and endometrioid are not caused by talcum</p> <p>22 powder use. What they did not do is</p> <p>23 separately look at them.</p> <p>24 BY MR. ZELLERS:</p> <p>25 Q. What they said is that with</p>

Judith Wolf, M.D.

Page 714	Page 716
<p>1 subtypes -- and subtypes would be 2 endometrioid, would be mucinous, would be 3 clear-cell ovarian cancer, correct? 4 A. Yes, those are some of the 5 subtypes. 6 Q. All right. It says the 7 epidemiology for the subtypes is inconsistent 8 and underpowered. 9 They say that, right? 10 A. Given as a reason for why they 11 did not look at those separately. 12 Q. Right. But they do say that, 13 correct? 14 A. In the -- they say that, given 15 the reason that that's why they did not look 16 at them separately, but they did not take 17 them out of the studies where they were 18 included and discard them. 19 Q. They say that for the subtypes, 20 the epidemiology is inconsistent, it's 21 underpowered, and, therefore, there's 22 considerable uncertainty for how subgroup 23 data should be examined, in particular, the 24 tumor subtypes. Therefore, they're not going 25 to analyze the subtypes in this assessment.</p>	<p>1 point me to where it says we found a causal 2 association between talcum powder use and 3 clear-cell carcinoma ovarian cancer. 4 A. What it says is that there's a 5 causal association between epithelial ovarian 6 cancer and talcum powder use. 7 What this is saying that you're 8 showing is that they're not separating them 9 out and looking at all the subtypes 10 individually. They're looking at a whole, 11 including all of the subtypes. 12 Q. All right. If you can, I'm 13 going to try to ask a really precise question 14 and I'd like you just to answer it. 15 Is there anywhere that you see 16 in the Health Canada risk assessment that 17 Health Canada expressly states that there is 18 a causal association between talcum powder 19 use and clear-cell ovarian cancer? 20 Can we find those words in 21 here? 22 DR. THOMPSON: Object to form. 23 A. Those words may not be in here, 24 but what is in here is that epithelial 25 ovarian cancer can be caused by talcum powder</p>
Page 715	Page 717
<p>1 Is that what it says? 2 DR. THOMPSON: Objection. 3 Asked and answered. 4 MR. ZELLERS: Okay. 5 BY MR. ZELLERS: 6 Q. Is that what it says, Doctor? 7 A. No, that's not what it says. 8 DR. THOMPSON: That's not what 9 it says. 10 A. That's not what it says. It 11 says that they're not going to look at just 12 the subgroup analysis. 13 So in the studies where they 14 separated out the subtypes, they're not 15 looking at those specific subanalyses, but 16 they're looking at the study as a whole, 17 which includes all of the subtypes. 18 BY MR. ZELLERS: 19 Q. All right. Well, nowhere do 20 they separate out and find a causal 21 association between talcum powder use and 22 clear-cell ovarian cancer, correct? 23 DR. THOMPSON: Object to form. 24 BY MR. ZELLERS: 25 Q. There's nowhere in here you can</p>	<p>1 use, and that analysis came from looking at 2 the studies that include all the subtypes of 3 ovarian cancer. 4 BY MR. ZELLERS: 5 Q. And I understand that's your 6 position. Two more questions. 7 Nowhere within the Health 8 Canada risk assessment is there an express 9 statement that Health Canada found a causal 10 association between talcum powder use and 11 endometrioid ovarian cancer, correct? 12 DR. THOMPSON: Object to form. 13 A. Same answer as the other one -- 14 BY MR. ZELLERS: 15 Q. Last -- 16 A. -- that that is included in 17 their conclusions because the studies 18 included all of the subtypes. 19 Q. Last question. And this is 20 with respect to mucinous ovarian cancer. 21 There's no express statement in 22 the Health Canada risk assessment that 23 there's a causal association or that they 24 found a causal association between talcum 25 powder use and mucinous ovarian cancer.</p>

Judith Wolf, M.D.

Page 718	Page 720
<p>1 Those words are not in this document, 2 correct? 3 A. The statement is that 4 epithelial ovarian cancer has a causal 5 association with talcum powder use, and that 6 is in assessing the studies that included all 7 of the subtypes, including clear-cell and 8 endometrioid and mucinous. 9 Q. And I understand that's your 10 position, and my question is: They don't 11 expressly find a causal association with 12 clear-cell, with mucinous, with endometrioid 13 ovarian cancer, but you believe that that 14 would be subsumed within their statement 15 relating to epithelial ovarian cancer, 16 correct? 17 DR. THOMPSON: Object to form. 18 A. It would be, because the 19 studies included all of the subtypes. 20 BY MR. ZELLERS: 21 Q. But you do agree with me that 22 those words, mucinous, endometrioid, 23 clear-cell ovarian cancer, are not contained 24 within the Health Canada assessment, correct? 25 DR. THOMPSON: Object to form.</p>	<p>1 A. Yes. 2 Q. And your recollection is that 3 at least some of the folks who wrote in said 4 maybe there's not enough power or not enough 5 patients included in the -- in the study; is 6 that right? 7 A. Yes. 8 Q. You, though, addressed in your 9 report, as we talked about -- you talked 10 about there may be a need for as many -- as 11 many as 200,000 women to study this issue, 12 and you're referring to Narod; and I'm 13 looking at your amended report, page 6. 14 A. Yes. 15 Q. And, in fact, O'Brien included 16 over 250,000 women; is that right? 17 A. Yes. 18 Q. All right. Let me just check 19 one thing. 20 Last question -- couple of 21 questions. 22 Are all of the opinions that 23 you anticipate testifying to at trial or any 24 hearing, you know, as of today based upon the 25 information you reviewed contained in the</p>
<p>1 A. I don't know if the words 2 mucinous, clear-cell and endometrioid ovarian 3 cancer are contained in here. I'm assuming 4 that they are. 5 BY MR. ZELLERS: 6 Q. Understood. 7 And what I mean is there's no 8 statement, at least that you have seen here, 9 expressly determining that there is a causal 10 association between talcum powder use and any 11 of those three subtypes, clear-cell, mucinous 12 and endometrioid ovarian cancer, correct? 13 DR. THOMPSON: Object to form. 14 A. Because they did not look at 15 them separately. They looked at it as a 16 whole. 17 BY MR. ZELLERS: 18 Q. Okay. Last question or two. 19 In your report, Ms. Thompson 20 asked you a couple of questions about O'Brien 21 and some of the letters to the editor, and 22 whether or not O'Brien was sufficiently 23 powered to allow for there to be a finding of 24 an association. 25 Do you recall those questions?</p>	<p>1 reports that we've marked as an exhibit to 2 the deposition and in the testimony that 3 you've provided? 4 A. Yes. 5 Q. All of the materials that you 6 considered and are relying on for your 7 opinions, you know, as of today are contained 8 in what we marked as Exhibit 5, your 9 materials considered and scientific authority 10 list as supplemented in each of the 11 case-specific reports as well? 12 MS. GARBER: Object to the 13 form. 14 DR. THOMPSON: Object to form. 15 BY MR. ZELLERS: 16 Q. If you can't answer, I'm going 17 to ask it another way. 18 Is there anything you can think 19 of today that you've reviewed or that you're 20 relying on in terms of formulating your 21 opinions other than what, you know, is 22 contained on your materials list? 23 MS. GARBER: Object to the 24 form. 25 A. There's nothing that I can</p>

74 (Pages 718 to 721)

Judith Wolf, M.D.

Page 722	Page 724
<p>1 think of today that I considered that it has 2 not been presented in the lists and the 3 information that I've shown.</p> <p>4 MR. ZELLERS: Thank you for 5 your patience. I have no further 6 questions.</p> <p>7 DR. THOMPSON: I'm going to 8 follow up a little with Health Canada. 9 I apologize for that, but -- I'm not 10 apologizing for that. Never mind.</p> <p>11 ----- 12 EXAMINATION 13 -----</p> <p>14 BY DR. THOMPSON:</p> <p>15 Q. Okay. Let's look at a few 16 places in Health Canada. We'll start with 17 (iii).</p> <p>18 A. (iii), that's the beginning.</p> <p>19 MR. ZELLERS: What page?</p> <p>20 THE WITNESS: (iii). That's 21 the beginning.</p> <p>22 BY DR. THOMPSON:</p> <p>23 Q. And I'm reading the last -- the 24 next-to-the-last paragraph: With regards to 25 perineal exposure, analyses of the available</p>	<p>1 Q. And did the epidemiological 2 studies that Health Canada referred to as 3 consistent and statistically significant in a 4 positive association often include subtypes?</p> <p>5 MR. ZELLERS: Objection, form, 6 misstates the evidence, misstates 7 testimony.</p> <p>8 MS. GARBER: Is that a speaking 9 objection?</p> <p>10 DR. THOMPSON: It sounded like 11 it, didn't it?</p> <p>12 MR. ZELLERS: It's a California 13 objection where we give the bases for 14 our form objection.</p> <p>15 MS. GARBER: Oh. I've been 16 here --</p> <p>17 MR. ZELLERS: As Ms. Garber 18 knows that.</p> <p>19 MS. GARBER: -- all day long, 20 so let me start over with my 21 objections.</p> <p>22 A. So the answer to the question 23 is that the studies included epithelial 24 ovarian cancer. Some of them said all the 25 subtypes. Some of them just called it</p>
<p>1 human studies in the peer-reviewed literature 2 indicate a consistent and statistically 3 significant positive association between 4 perineal exposure to talc and ovarian cancer. 5 The available data, meaning the epidemiology 6 studies that we've gone over --</p> <p>7 MR. ZELLERS: Well, objection 8 to --</p> <p>9 DR. THOMPSON: Sorry. Sorry.</p> <p>10 MR. ZELLERS: -- your 11 editorializing.</p> <p>12 DR. THOMPSON: Yeah. You're 13 right. You're right.</p> <p>14 MR. ZELLERS: You can read it, 15 but that's okay.</p> <p>16 BY DR. THOMPSON:</p> <p>17 Q. The available data are 18 indicative of a causal effect.</p> <p>19 Referring to the association 20 between perineal exposure to talc and ovarian 21 cancer, would the subtypes be included as 22 ovarian cancer in that statement?</p> <p>23 MR. ZELLERS: Objection, form.</p> <p>24 A. Yes.</p> <p>25 BY DR. THOMPSON:</p>	<p>1 epithelial ovarian cancer. And they were 2 included in the analysis that led to this 3 conclusion.</p> <p>4 BY DR. THOMPSON:</p> <p>5 Q. And let's look at page 17, and 6 in -- on page 17 --</p> <p>7 Okay. Let's not look at 17. 8 Let's look at page 36.</p> <p>9 A. Okay.</p> <p>10 Q. We've already looked at 17.</p> <p>11 On page 36, the last, I think, 12 full sentence of the first paragraph: 13 Overall, there's a high degree of consistency 14 in the epidemiological studies across several 15 decades conducted in different parts of the 16 world. Although there are uncertainties 17 related to bias, there's confidence in the 18 robustness of the available database for use 19 in characterizing ovarian cancer risk 20 attributed to talc exposure. Furthermore, 21 the available data are indicative of a causal 22 relationship.</p> <p>23 Does the ovarian cancer 24 referred to in that clause include the 25 subtypes?</p>

Judith Wolf, M.D.

<p>Page 726</p> <p>1 MR. ZELLERS: Objection, form. 2 A. It includes epithelial ovarian 3 cancer, which would include all subtypes. 4 BY DR. THOMPSON: 5 Q. And then let's go to another 6 place. I don't have the page number, so let 7 me look this up real quick. Okay. 8 DR. THOMPSON: My Internet went 9 out on me. Sorry. 10 (Pause.) 11 BY DR. THOMPSON: 12 Q. Okay. Let's go to page 43. 13 The paragraph that begins with "Based on the 14 available data." 15 A. (Nods head.) 16 Q. Based on the available data, 17 ovarian cancer was identified as a critical 18 health effect for the perineal route of 19 exposure to talc, and a long discussion of 20 why that is. 21 Data from a meta-analysis of 22 epidemiological studies indicate a consistent 23 and statistically significant positive 24 association between perineal exposure to talc 25 and ovarian cancer, with several references.</p>	<p>Page 728</p> <p>1 CERTIFICATE 2 I, MICHAEL E. MILLER, Fellow of 3 the Academy of Professional Reporters, 4 Registered Diplomatic Reporter, Certified 5 Realtime Reporter, Certified Court Reporter 6 and Notary Public, do hereby certify that 7 prior to the commencement of the examination, 8 JUDITH WOLF, M.D. was duly sworn by me to 9 testify to the truth, the whole truth and 10 nothing but the truth. 11 I DO FURTHER CERTIFY that the 12 foregoing is a verbatim transcript of the 13 testimony as taken stenographically by and 14 before me at the time, place and on the date 15 hereinbefore set forth, to the best of my 16 ability. 17 I DO FURTHER CERTIFY that pursuant 18 to FRCP Rule 30, signature of the witness was 19 not requested by the witness or other party 20 before the conclusion of the deposition. 21 I DO FURTHER CERTIFY that I am 22 neither a relative nor employee nor attorney 23 nor counsel of any of the parties to this 24 action, and that I am neither a relative nor 25 employee of such attorney or counsel, and 1 that I am not financially interested in the 2 action.</p> <p>19 MICHAEL E. MILLER, FAPR, RDR, CRR 20 Fellow of the Academy of Professional Reporters 21 NCRA Registered Diplomatic Reporter 22 NCRA Certified Realtime Reporter 23 Certified Court Reporter 24 Notary Public in and for the 25 State of Texas 1 My Commission Expires: 7/9/2024 2 Dated: September 16, 2021</p>
<p>Page 727</p> <p>1 Would the ovarian cancer 2 referred to in that clause include all the 3 subtypes of epithelial ovarian cancer? 4 MR. ZELLERS: Objection, form. 5 A. Yes, because those papers that 6 they discussed, many of them include all 7 subtypes or don't separate and just call it 8 epithelial ovarian cancer. 9 BY DR. THOMPSON: 10 Q. And the last sentence: Given 11 that there's a potential for perineal 12 exposure to talc from the use of various 13 self-care products, a potential concern for 14 human health has been identified. 15 And that would include all the 16 subtypes of epithelial ovarian cancer? 17 MR. ZELLERS: Objection, form. 18 BY DR. THOMPSON: 19 Q. Is that right? 20 A. Yes. 21 DR. THOMPSON: That's all. 22 MR. ZELLERS: I have no further 23 questions. Thank you. 24 THE WITNESS: Thank you. 25 (Time noted: 4:41 p.m. CDT)</p>	<p>Page 729</p> <p>1 INSTRUCTIONS TO WITNESS 2 Please read your deposition over 3 carefully and make any necessary corrections. 4 You should state the reason in the 5 appropriate space on the errata sheet for any 6 corrections that are made. 7 After doing so, please sign the 8 errata sheet and date it. 9 You are signing same subject to 10 the changes you have noted on the errata 11 sheet, which will be attached to your 12 deposition. 13 It is imperative that you return 14 the original errata sheet to the depositing 15 attorney within thirty (30) days of receipt 16 of the deposition transcript by you. If you 17 fail to do so, the deposition transcript may 18 be deemed to be accurate and may be used in 19 court.</p>

Judith Wolf, M.D.

<p>Page 730</p> <p>1 ERRATA</p> <p>2 PAGE LINE CHANGE</p> <p>3 _____</p> <p>4 REASON: _____</p> <p>5 _____</p> <p>6 REASON: _____</p> <p>7 _____</p> <p>8 REASON: _____</p> <p>9 _____</p> <p>10 REASON: _____</p> <p>11 _____</p> <p>12 REASON: _____</p> <p>13 _____</p> <p>14 REASON: _____</p> <p>15 _____</p> <p>16 REASON: _____</p> <p>17 _____</p> <p>18 REASON: _____</p> <p>19 _____</p> <p>20 REASON: _____</p> <p>21 _____</p> <p>22 REASON: _____</p> <p>23 _____</p> <p>24 REASON: _____</p> <p>25</p>	<p>Page 732</p> <p>1 LAWYER'S NOTES</p> <p>2 _____</p> <p>3 PAGE LINE</p> <p>4 _____</p> <p>5 _____</p> <p>6 _____</p> <p>7 _____</p> <p>8 _____</p> <p>9 _____</p> <p>10 _____</p> <p>11 _____</p> <p>12 _____</p> <p>13 _____</p> <p>14 _____</p> <p>15 _____</p> <p>16 _____</p> <p>17 _____</p> <p>18 _____</p> <p>19 _____</p> <p>20 _____</p> <p>21 _____</p> <p>22 _____</p> <p>23 _____</p> <p>24 _____</p> <p>25</p>
<p>Page 731</p> <p>1 ACKNOWLEDGMENT OF DEPONENT</p> <p>2</p> <p>3</p> <p>4 I, JUDITH WOLF, M.D., do hereby</p> <p>5 certify that I have read the foregoing pages</p> <p>6 and that the same is a correct transcription</p> <p>7 of the answers given by me to the questions</p> <p>8 therein propounded, except for the</p> <p>9 corrections or changes in form or substance,</p> <p>10 if any, noted in the attached</p> <p>11 Errata Sheet.</p> <p>12</p> <hr/> <p>13 JUDITH WOLF, M.D. DATE</p> <p>14</p> <p>15 Subscribed and sworn to before me this</p> <p>16 ____ day of _____, 20 ____.</p> <p>17 My commission expires: _____</p> <p>18</p> <p>19</p> <hr/> <p>20 Notary Public</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	

77 (Pages 730 to 732)

A	729:19	684:5	506:8 507:11,23	592:22
a.m	acknowledge	Advancing	508:22 509:8	ambiguous
429:19 436:3	548:3 651:21	577:14	511:13 513:20	499:3 501:17
508:19,20 575:6	acknowledged	advise	516:22 524:1	amend
abdomen	547:24 651:22	459:8	539:14,23 540:9	525:6 708:6,11
465:6	ACKNOWLED...	affect	540:13 541:2,5,7	amended
abdominal	432:16 731:1	455:25	541:10 581:4	437:7 574:8 575:24
512:19,22	act	African	583:4 604:1 605:3	610:4 641:8
ability	568:25	643:21,24 644:3,11	605:6,7 613:15,21	720:13
553:2 728:9	action	644:14,16,20	626:15 644:9	American
able	728:14,16	645:4,10 646:6,16	649:25 650:25	643:24 644:3,11,14
478:13 482:13,17	active	646:21 647:6,9	651:1 675:24	644:16,20 645:4
490:19 504:23	586:1	648:11,18,20	677:4 684:7 704:7	645:10 646:6,16
534:14 535:24	activities	649:15 650:21	718:21	646:21 647:6,9
537:9 543:22	669:8	651:8,14,23 652:3	agreed	648:11,18,20
566:23 606:18,23	activity	652:7,11 653:18	438:21 517:1 518:3	649:15 650:21
626:3 655:20	556:11	653:20,22,24	646:1 675:12,20	651:8,14,23 652:4
684:22 686:21	actual	654:6 655:1,11	677:13 680:16	652:7,11 653:18
687:5,24 689:3	518:16 701:18	African-American	agreement	653:21,23,25
abnormalities	acute	643:15	485:18 488:24	654:6 655:1,11
502:23 570:1	556:3 558:17 559:3	age	489:8 534:12	Americans
abraded	559:8 663:11,13	440:19 455:21	Ah	643:21
662:10	663:16,25 664:6	521:8,17 522:25	643:2	amount
absence	add	523:12 530:20,23	ahead	515:20 531:5 550:4
515:11	484:4 491:25	532:16 577:10,12	655:18	550:5,16,21,25
absolute	added	577:14,16,21,22	al	551:20 609:7
539:18 540:10	689:13	577:24 578:6,9,14	429:12 433:13,16	632:17,21 700:9
Absolutely	addition	606:2,10 613:5,8	433:19,23 434:12	amounts
694:3	533:13	613:8,11,12,15	434:20 480:15	561:17,18 565:10
abstract	additional	621:16 623:1	482:8 490:5	565:11
490:10,21 491:4	460:19 492:6	632:1 680:1	497:24 640:24	anal
643:18 644:24	531:14 621:10	agent	667:7	701:7
645:1 650:19	660:24 661:3	663:1	Alabama	analogy
667:18	698:12	aggressive	430:4	516:17 526:24
Academy	Additionally	607:7,9	alive	545:9
429:20 728:2,19	457:3	ago	444:20	analyses
accept	addressed	452:22 537:24	alleges	644:3 711:21,24
466:24	720:8	544:9 589:16	552:2	712:1 722:25
accepted	adequate	592:9 593:25	allele	analysis
467:14 697:9,12	523:6 633:23	agree	526:15	492:12,16 546:8,10
access	adolescence	440:9,10 446:13	ALLEN	567:19 712:12
515:21 553:9	454:15	447:3 448:22	430:2	715:12 717:1
accidental	adopted	457:22 458:1	allow	725:2
622:16	660:4	461:6 469:14	719:23	analyze
accurate	adulthood	493:15 494:19	allowed	515:23 714:25
520:21 625:9,18	454:15	495:8 499:11,14	449:22	analyzed
	adults	501:19 503:17	allowing	485:8 567:21,22

681:2	632:18 670:3	article	645:25 653:3,11	476:5 480:13
anatomy	anyone's	470:13 474:18	653:13 654:9,21	484:19 485:9,21
581:1	577:24	497:13,14,21	668:7,10,14	487:12,20 488:6
and/or	anytime	498:3 537:23,23	669:18 673:2	488:16,17 489:3
557:16 568:21	563:13 688:15	580:19,23,24	677:24 678:9	489:10,21 491:16
585:1 598:9,9	anyway	583:4 640:17	680:9 682:24	492:23 493:4,16
Anderson	570:6 602:20	643:13 645:13	685:19 686:13	493:20 495:11
445:6	apologize	662:23,24 666:25	687:2 694:13	498:19 500:1,7,8
Angeles	530:6 722:9	667:11 697:23	695:14 703:2	500:11,21,24
430:19	apologizing	698:10 703:19	715:3 719:20	501:6 538:23
Annette	722:10	704:23	asking	539:12 540:6
619:18,21 656:20	apostrophe	articles	447:21 505:25	542:9 544:11,14
Annise	706:14	580:18 696:6	509:2 520:25	544:23 545:10,22
619:18	appear	asbestiform	535:2,12,14 536:6	546:4,18 547:16
answer	599:18	562:23	536:10 557:24	582:14 583:5,13
432:22,23 468:10	appearance	asbestos	611:18 658:8	583:17 652:6,11
481:6,8,13,16	662:11	505:17 560:17,23	673:5,5,14 700:19	652:13 667:19
496:16 497:5	appears	561:17 562:3,7,13	701:9	668:16 693:10
499:23 500:13	603:21 616:23	562:17 563:1,5,10	assess	713:10,15 715:21
503:21 507:22,23	application	563:14,19,21,22	514:22 537:19	716:2,5,18 717:10
519:17,21,24	554:23	564:2,5,14,15,19	546:7 671:16	717:23,24 718:5
520:3 534:21	applied	564:23,25 565:5	681:21 682:8	718:11 719:10,24
541:14 558:24	509:9 553:2,4	565:10 566:1,9,11	687:16	723:3,19 724:4
559:3 570:14	580:3 585:15	566:13,15 567:12	assessed	726:24
581:9 590:13	633:11	567:23 587:3,12	470:21 550:15	associations
591:9 592:22	apply	587:17,19 588:14	670:21 682:14	540:21 541:1,19
601:24 617:10	508:23 704:23	588:24 599:20	693:11 704:13	650:22
619:20,24 653:15	approach	637:21	assessing	assume
656:22 670:24	522:15 553:15	ascribe	718:6	458:3 460:13
677:9,25 679:1	approached	534:14 535:6	assessment	465:20 484:11,15
716:14 717:13	681:14	537:15	549:1 550:2 551:4	522:17,19,24
721:16 724:22	appropriate	ascribes	661:1,5 694:18	538:18,19 553:15
answered	729:6	517:3	695:1,6,11,16	553:20 554:2
459:17 461:1,2	approximately	ASHLEY	711:14 712:20	568:2 574:21
519:19 540:12	473:11 584:4	430:12	714:25 716:16	635:14 660:3,8,10
564:21 601:12,13	April	aside	717:8,22 718:24	assuming
653:3,11,13 654:9	711:14	673:13 677:17,20	associated	482:22 494:14
654:22 673:2	area	asked	453:10,13,16,17	502:14 549:16
677:24 678:9	476:5 552:9 580:3	459:17 460:25	457:1 459:3 471:6	663:19 719:3
680:9 685:19	633:5 662:5,6,16	466:3 496:10	475:23 477:22	assumption
686:13 687:2	663:19 697:8	534:10 564:21	478:3 502:12,25	522:10 537:2
715:3	argue	570:13 571:13	503:2 504:1,3	563:13
answers	448:7	583:3,22 585:20	546:23 547:2,4	assumptions
520:2 731:5	arriving	588:13 601:11	600:23 637:22	585:7
anticipate	599:3	617:6 621:3 622:5	667:23 682:12	Athens
609:6 610:9 720:23	arthritis	622:13 628:16	association	430:14
anybody	555:25	642:8,11,14,21	433:11 450:16	atomic

572:5	540:15 541:20	back	557:23 656:4 722:18,21	best
attached	640:18 643:10,22	512:23 518:2	begins	607:4,22 728:9
729:12 731:7	644:5,17 645:6	519:15 520:13	703:24 726:13	better
attempt	649:11 650:3,18	526:24 537:22	behalf	501:20,25 502:6,11
584:1 631:20	651:21 652:3,5	542:5 562:21	436:16	504:24 533:5,6
632:16	662:25 665:12	566:16 575:3	believe	536:13 543:9
attempted	667:17 691:15	582:10,13 607:4	438:21,25 439:18	560:13 628:25
549:5 583:23	693:20,23,25	629:10 655:19,20	465:14 466:6	654:4
attorney	authors'	674:12 692:7,14	468:16,20 479:2	beyond
728:13,15 729:16	646:1 648:7 649:2	698:21	480:21 495:4,5	547:21 624:10
attorneys	available	background	496:21 502:21	bias
574:1 589:20 590:3	481:25 485:8	494:17 531:19	509:19 517:1	553:11,24 554:3
591:7 628:16	514:18,22 567:19	643:18 690:1	725:17	
attribute	711:25 722:25	bacterial	523:2 527:6	BIDDLE
493:14 519:5	723:5,17 725:18	666:19	539:20,21 546:16	431:2
536:16 540:20	725:21 726:14,16	Ball	546:20 548:6,17	bigger
687:25	Avenue	656:15,25 657:4	548:23 550:19	465:6
attributed	430:13	banned	552:16 553:14,17	bilateral
725:20	average	666:3,6	561:7 562:20	460:23
aunt	549:18 577:16	Baptist	566:3,10 569:6,19	biological
439:11,19 440:17	606:10 613:7	615:11 659:5	571:3,21 572:1,8	619:8 620:20 621:4
441:10 442:25	684:4	basal	573:2 579:19,23	621:4 665:15
443:4,7 444:21	aware	453:18 454:14	580:13 581:13	biomarker
445:14,16,19	448:1 464:2,20	455:19,20 456:18	584:18 585:25	540:23 541:11
446:4,10,11,18	476:21,25 478:16	586:14	586:5 590:23	bit
458:5 460:1	479:18 492:20	based	604:10 606:24	508:13,16 537:24
578:25 579:7	493:7 506:6	479:19 501:4 511:7	607:2 611:25	bladder
618:14 620:8	549:16 556:14	529:10 598:22	617:20 627:21	512:24 513:12
656:12,15,18	562:19 563:9	624:20 639:25	628:7,11 631:16	BLASINGAME
657:6,14,16,25	567:17 570:21	706:25 720:24	634:1 635:8	430:12
658:12,16,19	589:6,8 594:7,10	726:13,16	636:20,24 650:6	blisters
659:11,19 660:5	602:16 614:19	baseline	650:15 675:16	662:12
660:11,19	616:7 625:20	667:19,22 668:9	681:17 682:2	bloating
aunt's	637:19 641:12	bases	690:8,15 693:5	512:20,22
660:20	661:9 662:17	724:13	696:8 698:10	block
Austin	664:5,17 666:2	basis	701:20 718:13	516:10,10,13,15
429:19	668:19 669:6,15	509:25 681:3,5	bell	622:3
author	690:12	710:2	711:8	blocks
470:18 700:15	<hr/> B <hr/>	bath	benefit	515:19,22 595:20
authority	B-U-Z-Z-A-R-D	580:24	540:4	595:23 596:16
721:9	706:13	Beach	benign	597:4 634:14
authors	baby	430:9	440:5 453:20,24	635:2,18 636:3
471:5 474:23 475:5	549:13 567:21	430:2	454:1,12 455:4	638:1
475:9 490:23	568:14 569:12,15	BEASLEY	456:8,8,11,22	blood
498:6 499:7,8,12	569:16 585:22	570:10	457:12,16	601:2,18 602:2
501:3,3,11,14	589:9 599:12	beginning	Berge	621:7 625:15,19
538:20 539:16			492:21	626:2,4 639:2

660:1,6,12	574:2,5 704:24	493:8 508:7,10	C5	447:17,19,25
blurted	Bone	536:16 575:3	636:3	448:25 449:1
530:6	597:23	609:3,7,12,15	calcium	450:7,12,13,22
board	born	621:21 646:1	597:10,14,20,23,24	451:7,19,23 452:2
696:16	623:7,11	682:17	600:1,8 638:14	452:11,24 453:11
body	bottles	breast	California	453:12,16,23,24
433:22 455:18	567:13,18,25 568:1	439:15,20 440:11	430:9,19 724:12	454:10,19 455:2,2
456:1 497:23	568:7	440:16,20,24	call	456:21,24,25
541:22 552:5,9	bottom	441:10 443:4	509:19,20 510:3	457:21 458:5,6,7
555:11 582:7	538:11 596:25	444:23 446:5,10	514:7 540:6	459:12,15,19
585:15 600:6	619:1 711:19	446:18 447:14,15	577:21 589:13,19	460:1,2,3,11,12
613:20 633:11	bowel	458:6 460:2,11	589:21,24 590:6	460:16 461:6,12
636:17 638:7	512:24 513:5	579:1,8 618:14	591:15 592:15,18	461:15 462:5,7
663:25 664:7	box	619:24 620:8	727:7	468:3 469:17,20
665:9,13	619:5	623:3 624:3	called	470:14,22 471:9
body's	Bradford	626:18 627:15	455:19 510:11	471:19 472:1,15
531:20 552:24	492:12,15 508:23	656:12,16,20	563:23 724:25	472:22 473:2,17
bombs	509:1,8,20 510:2	657:4,6,15,16,25	calling	474:4,10,13,21
572:5	brain	658:4,12,16,20	479:22	475:1,20,25 476:3
Bondurant	453:19 454:18	659:12 660:11	Canada	476:4,24 477:18
436:15,19 437:3,10	455:1	697:16,25 702:1	694:17,22,25 695:5	478:18 479:11,13
441:6 454:16	BRCA	breasts	695:10,15,23	480:14 482:8
457:24 461:22	441:7 516:14 518:5	697:19,21	710:14,15,15	483:6,8,23 484:14
462:10 464:3,13	518:5,7,8 523:22	bring	711:3,13,19 712:7	485:7,10,20,21
469:15 509:15	523:24 524:3,6	481:3 699:16	712:19,19 713:7,9	486:5,8 487:13,21
542:3,11,16 547:6	525:24 526:7,15	broad	716:16,17 717:8,9	488:7,12 489:2,4
548:22 549:7	526:25 527:14,16	503:21	717:22 718:24	489:21 490:5,15
551:21 555:6	528:13,22 530:10	broader	722:8,16 724:2	491:17 492:17,24
560:11 567:9,14	530:11 532:14,17	675:17	Canada's	493:17 494:21
568:8 572:9,18	624:19 625:7,14	broke	694:14	495:14 496:14
573:15 575:1	625:18,18 626:10	592:5	cancer	497:24 498:8
612:13 684:10	628:14,23 629:5	broken	433:12,15,18,23	501:23 502:8,14
704:20 709:7	630:16,18 631:2,5	663:24 664:6	434:11,19 437:18	503:3 504:4 505:2
Bondurant's	684:24	brother	437:23 438:2,6	505:5 506:9,13,21
437:18,22 438:5	BRCA-based	442:19 444:20	439:12,15,20,20	507:2 509:7,11,14
439:21 442:15	631:9	445:15	439:24 440:4,6,12	510:8,14,20
448:12 453:4	BRCA-positive	brought	440:13,15,16,20	512:15,19 513:2,6
456:7 510:5	525:23 526:5 680:3	553:25 693:6 694:8	440:25 441:3,8,10	513:10,12,15,21
513:19 514:12	BRCA1	BURCH	441:11,24 442:3,5	514:2,13 515:16
515:4 532:23	524:11,12,21 525:3	430:12	442:11,17,25	516:3,23 517:2,5
533:12 534:5,13	525:8 527:22	Buz'Zard	443:2,5,16 444:20	517:8,10,18,20
535:7,15 536:2,18	530:19 631:6	706:10	444:22,23,24,24	518:2,6,11,13,16
537:7,8 548:7,14	BRCA2		445:6,14,15,16,18	518:21,22 519:2,3
560:8,16 561:8	446:24 524:15,21	C	445:18,21,25	519:4,7 520:16,19
565:25 566:4	525:15 527:23	C	446:4,5,6,6,10,17	521:11,21,23
567:2 568:15	530:22 631:6	430:1,17 431:1	446:18,22,23,25	522:1,6,12,16
570:10 573:9	break	432:5 436:2	447:1,9,14,16,16	523:1,8,15,17,19

523:23,24 524:5	602:8,18 603:11	677:22 678:4,11	700:22 701:16	568:12 574:6
524:13,17 525:10	603:13 604:1,5,12	678:13,15 679:4,5	702:2 704:14	575:12,14,19
525:17,19,24,25	604:15,23 605:1	679:9 680:5,19,23	707:10	577:4,17 579:20
526:3,6,8,16,19	605:23 606:1,5,21	680:23,25 681:12	candidates	584:18,22 585:8
526:19 527:17,25	607:4,8,23,24	681:13,15,19,25	606:20	587:24 588:1,16
527:25 528:8,11	608:3,5,8,12	682:5,11,11,15	carbon	588:19 589:5
528:15,19 529:2	610:16,19,25	683:15,25 684:13	638:14	591:21 592:19
529:17 530:21	611:1,11,20,24	685:17 686:16,23	carcinogenesis	594:4,8,13,18
531:6,11,15 532:4	612:6,16,23 613:3	687:8,10,15,20,21	540:23	595:4,20 604:9
532:7,10,25	613:6,22,23 614:3	690:22,22 693:10	carcinogenic	606:7 608:11
533:12,19 534:4,4	614:7,12,17,22,24	694:14,19,23	565:21,21 566:15	609:1,24 613:14
534:15,17,18	615:1,14,19,24	695:6 698:4,19,25	571:10	614:9 616:20,24
535:8,9,11,16,19	616:3,5,9,23	699:20 700:14,22	carcinogenicity	618:6 622:21
535:20,21 536:2	617:13,22 618:1	701:1,6,7,7,8,18	565:5,6,9,13,19	623:25 627:22
536:18 537:5,11	618:14 619:24	701:24 702:1,2	carcinogens	629:3,10,15 630:1
537:16 538:24	620:8 622:21	703:6 706:20,23	505:16 637:21	630:15,17 631:17
539:13,19 540:5	623:3,3,4 624:2,3	710:17,23 712:22	carcinoma	632:12 634:14
540:11 543:5,11	624:4,4 626:17,18	713:1,11,16,18	437:11,12 478:2	635:3 640:1,7,10
543:13,17 544:3,7	626:24,25 627:14	714:3 715:22	492:13 503:1	647:15 657:23
544:24 545:11,16	627:15,17,23,24	716:3,6,19,25	504:1 569:20,22	658:22 659:10
545:23,25 546:19	628:2,7 632:8,13	717:3,11,20,25	570:10 695:1	660:14 670:8
546:24 547:4,7,17	632:25 633:20	718:4,13,15,23	713:11 716:3	671:8,10 674:4
548:1,5,10,18,24	634:2 637:14,23	719:3,12 723:4,21	care	675:15 681:4
549:15 550:7,23	638:11,16 640:4,8	723:22 724:24	468:2 469:13	682:23 683:3,10
551:11 553:13	640:24 643:15,20	725:1,19,23 726:3	509:25 520:1	683:14 684:8
555:9,14,15	644:1 645:9 646:6	726:17,25 727:1,3	593:21 594:4	685:14 687:23
556:16,20,21	646:19 648:11	727:8,16	683:21 696:18	698:12 704:24
557:5,14,17,25	649:14 650:23	cancerous	697:6	707:1
558:1,5,10 560:9	651:5,11 652:21	529:7 571:25	carefully	case-controlled
560:16,24 561:10	652:25 653:9,20	cancers	729:4	483:22 541:25
561:21 562:4	654:17 655:2,13	446:14,16,20 447:4	case	case-specific
565:22 566:14,17	656:12,16,20	447:8 451:3,25	436:15 438:25	436:19 437:2 552:1
566:22,24 567:2,6	657:4,7,15,17	452:3 453:18,19	442:7 486:13,16	552:6 574:10
568:15 570:2,14	658:1,4,12,17,18	453:20 454:12,14	486:19,21 488:23	575:13,16,19
570:20 571:4,11	658:20,21 659:6	454:21 455:21	492:5 508:12,14	576:3 595:13
571:18 572:3,7,13	659:11,12,14	456:19,25 472:20	508:16 509:6	599:3 609:23
572:19,25 573:12	660:11,13,16	472:21,23 473:4	510:5,16 513:19	610:2,8,11 634:11
576:10,15,19,25	666:12 667:1,7,14	482:14,15,18	514:24 515:4,13	637:7 707:19
577:3,5,13 578:4	667:21,24 668:4	488:17,21 493:3	516:2 519:10	721:11
578:8,16,19,21,25	668:20,24 669:4	498:20 504:8	526:20 531:9	cases
579:1,4,8,9,11,14	669:12,16,23	506:14 507:7,20	532:23 534:5,6,13	479:16 482:14
579:15,24 582:15	670:11,13,20,22	517:9,16 534:9	535:15 536:18	483:5,23 484:14
583:6,11 584:10	671:5,11,15	570:15 572:4	537:8,8 546:13,15	484:16 485:7
584:18 586:13,15	673:19,20,21	604:8 624:8 674:2	548:4,7,14 550:20	486:5 488:11,22
588:4,5,10,20	674:9,13,16,25	674:21 676:21	553:12 559:23	489:11,13 490:17
594:24 597:13,18	675:6,11,17,19	684:5 687:18	560:8,16 561:8	490:19 491:12,21
597:24 600:2,8	676:5,24 677:5,10	693:12 695:12	565:25 566:4	494:25 495:10

499:24 500:4,4,11	441:18,23 442:5	678:11,13,23	511:15,21 537:4	429:20,21 696:16
500:18,24 508:4	442:11,12,14	679:9,11,15,21	546:23 555:13	728:3,3,20,20
514:25 517:1,3,10	453:20 454:12	680:18,23,25	557:16,18,21	certify
517:13,18,21,22	455:4 506:5,9,21	681:9,13,18	572:24 584:9	728:4,7,10,13
518:1 522:15	507:1 509:13	682:14 684:16,19	651:5 665:15	731:4
529:15 537:3	510:8,19 512:11	684:20 685:8,23	706:19	cervical
551:9,12 553:15	512:12 513:13	686:15,15 694:22	cavity	445:14
561:8 562:1	514:1,12 518:1,5	699:19,19 706:23	cervix	446:11,12 595:25
566:23 575:2	518:11,16 519:6	707:9,14,19	CDT	701:7
584:14 586:4	521:22 522:1,11	caused	429:19 436:3	cesarean
588:2 604:22	522:20 523:3,8,19	452:25 509:7,10	508:20 575:7	698:6,13,15,18
605:8,12,14,16	525:25 526:16,19	517:9,18,20,22	582:25 592:3	challenge
628:21 632:10	527:25 528:11,15	520:19 522:5	609:20 621:25	513:9,14 551:7
639:10 640:6	528:19,21 529:8,8	526:7 527:16	645:23 682:21	challenging
644:19 647:7,7	529:9,16 531:11	529:3 531:12	727:25	582:6
670:9 671:4,9	531:14,18,22,24	534:15,16,18	cell	chance
675:10,18 676:3	532:1,3,10,10,22	535:10 536:7,8,9	444:20 453:18	452:18 472:15
677:4,17,20,21	533:18 535:7,8,10	548:5,18,24	454:14 455:19,20	530:20 536:7,9
678:15 679:4	536:1,22,23,24	551:11 553:13	456:18 516:9	607:3 667:10
681:3,15,22	537:16,19 538:23	555:2 557:3	527:4,8 528:18,21	chances
682:13 685:4,5	539:11 544:6	560:17,24 561:9	529:6,7,9 531:18	474:9 611:23
categories	547:8,19 548:6,7	567:3,6 579:24	532:1,8,9,13	612:22
648:16	548:10 550:6,23	588:19 613:6	555:20 566:21	change
category	551:17 552:16	671:14 679:5	571:24 583:9	450:18 453:1
701:19	555:15,18,22	680:5 684:11,22	586:14 681:11	515:13 528:23
cations	556:12 558:5,9,10	685:7,9,15,22	701:23	555:16 640:15
598:7,19	558:10,13 559:9	686:3,10,22,24	cell-type	689:13,22 699:18
causal	559:12,22 560:1	701:6,23 713:21	583:10	707:14,19 730:2
540:20 541:1,7,19	561:9,20 565:22	716:25	cells	changed
712:21 713:10	566:13,17 568:14	causes	497:5,6,6,7 532:3	554:20 689:19
715:20 716:1,5,18	572:17 576:10	437:22 438:4,18	555:17 559:23,24	690:10
717:9,23,24 718:4	584:17,17 588:5,9	439:5 456:22	559:25,25 560:5	changes
718:11 719:9	594:24 600:10	486:7 507:19	578:19 601:3,18	502:12 512:24
723:18 725:21	604:5,11,11,14,19	512:13 516:23	602:3 639:3 706:8	532:9,22 555:17
causally	604:23 605:2,20	517:5 522:18	cellular	697:18,21,24
710:17,23	605:22 608:11	523:1,14 528:18	555:8,17 559:16	729:11 731:6
causation	610:15,25 622:13	530:15 532:7,24	706:6	characteristics
508:24 509:2,3,5	627:3,24 628:1	533:11 535:13	Center	649:1
515:8,14 542:2	632:8,13 634:2	547:25 555:9,24	445:6 615:11 659:5	characterizing
694:18 700:16	638:16 640:4,8	560:8 561:14,20	506:20 550:8	468:6
701:1	651:11 663:9,12	588:3 619:23	696:15,18 711:2	charge
causative	663:16,22,25	664:6,15 674:8	certainty	725:19
611:3 674:15	664:2,7,11 665:24	675:6,19 677:21	708:2	chart
679:20 682:4	666:5 670:11	690:21 696:24	CERTIFICATE	468:6
cause	671:5,15 674:21	701:16	432:14 728:1	check
429:11 437:17	675:11,16,19	causing	642:1 720:18	642:1
438:16,22 439:2	676:4 677:5 678:3	456:21 469:9	certified	720:18

Chemical	clarification	513:21 533:12	combinations	comparatively
665:9	685:21 706:11	566:14 567:2	598:8	530:8
chemotherapy	clarified	569:20 570:4,10	combined	compared
602:11,15 606:16	495:7	695:1 710:16	488:13	534:15,17 655:3
661:11	clarify	712:22 713:2,11	come	comparing
child	544:12 604:15	713:19,20 714:3	468:13 516:18	481:6
456:4	615:18	715:22 716:3,19	532:13,14,15	competent
children	Clarke-Pearson	718:7,12,23 719:2	552:1 565:3 575:3	676:3
458:8 460:4 573:23	527:7	719:11	607:4 692:14	competing
620:20	Clarke-Pearson's	clear-cells	comes	511:24 513:4
chlamydia	506:24 507:16	479:7 489:9 491:6	447:7 458:4 511:4	complete
544:1	clause	712:15	572:4 574:12	507:25
chlamydial	725:24 727:2	client	598:25 638:6	completed
544:4	clear	582:10	comfortable	602:11,13,15
chromium	487:7 495:23 499:3	clients	697:2	completely
588:25	501:5,8 533:22	591:8	coming	556:11
chronic	540:4,20 543:7	clinical	533:9	complicated
544:2 555:7,10,12	614:3 616:1,4	457:4 461:24 469:8	commencement	513:12
555:21,23 556:4,7	621:9 658:7	477:8 536:5 697:8	728:4	complications
557:15 558:6	663:17 670:21	clinically	commencing	554:13,25
559:11,18,19	674:15 693:8	664:17	429:19	component
600:16 601:19	clear-cell	clinician	commentary	512:4
602:4 638:21	437:10,12,18,23	513:25	449:15	composed
639:3,10,14,16,21	438:5 469:17	close	comments	638:14
639:23 663:13,22	471:7,11,18	479:7	480:16 530:2	composition
664:2,8 697:12	472:19,20,22	coauthor	Commerce	597:10,20,23 600:1
698:21	473:2,4,17 474:10	497:14 537:25	430:3	compound
cigarette	474:13,20 475:1	cobalt	commission	568:13
544:25 545:17,19	475:20,25 476:6	589:1	728:22 731:17	computer
CIRCUIT	476:24 477:17,21	coffee	common	481:19
429:8	478:2,6,8,18,23	544:23,25 545:11	478:6 503:6,13	concept
circumstances	479:2,10,19 480:2	545:15,21,24	504:6,7,17 505:12	504:13 516:20
700:9	480:4 482:14,18	cohort	513:1 543:8 544:5	concern
cirrhosis	483:6,8 484:13,16	666:22	544:25 556:22	528:19 727:13
513:6	484:20 485:7,9,21	collectively	569:25 570:4	concerned
cite	486:8 487:12,20	651:18	597:17 600:7	607:23
581:2	488:7,11,18,21	College	606:7,8,11,13,17	concerning
citing	489:2,13,21	430:13	643:23 644:10	542:9
580:19	490:16,17,19,25	colon	651:23 667:21	concert
CITY	491:12,17,21,24	444:24 513:12	673:10 697:11,18	568:25
429:8	492:12,17,24	603:16,17 701:7	698:22	conclude
claim	493:3,9,17 494:11	702:1	commonly	540:25 541:18
553:12	494:20 495:12,14	column	476:6 504:19 558:3	550:22 632:12
claimed	496:19,25 499:2	498:15 703:22,22	606:4 702:2	694:18
585:14	501:7,16 502:17	703:23	communicated	concluded
claims	503:3 504:3,9	combination	589:11 590:25	501:12 713:9
584:3 631:22	505:14 510:8	561:2 669:8 680:4	593:3	concludes

711:15 712:8,20 712:24 conclusion 490:12 538:22 539:2,3,8,22 649:2 650:19 710:16,22 712:10 725:3 728:12 conclusions 538:14,15 646:2 694:15,21 695:22 696:3 717:17 condition 697:17 conducted 511:6 644:1 711:21 711:24 725:15 confers 498:11 confidence 472:8,10 544:16 583:14 725:17 confirm 462:12,25 463:13 465:8 466:9 469:12 630:11 confirmation 462:1,2 463:24 465:21 466:16,24 467:3,11,19 469:1 533:23 630:24 631:3 704:21 705:8 confirmed 438:12,13 464:21 468:22,23 630:8 630:10,23 confluent 662:12 confounder 541:23 542:25 544:19 545:14,20 546:17 547:2 confounders 542:20,21 547:18 confounding 540:24 541:13	547:15 confused 495:20 657:10 680:12 confusing 613:25 connection 476:8 643:14 consider 463:17 467:4,9 468:21,24 510:1 511:24 523:7 525:24 528:10 542:1 544:24 553:23 554:1 563:19 572:23 578:9 607:10 627:5 657:21 658:13,15 660:14 666:11 669:2,21 680:24 708:19 considerable 712:4 714:22 considered 489:10 542:18 563:1,10 578:3 605:18 641:9 698:16 721:6,9 722:1 consistency 711:23 725:13 consistent 456:12 457:13,17 476:23 477:16 542:8 615:23 632:5 694:5,10 702:16 723:2 724:3 726:22 consistently 498:18 consortium 479:20,21,23 483:14 constituents 598:4 635:24 construction 590:2,19 592:6 587:8,9	consult 591:23 contain 445:3 588:24 contained 561:19 588:15 707:23 718:23 719:3 720:25 721:7,22 contains 437:1 588:23 664:11 contamination 567:13 content 590:1,14 context 593:22 continue 449:24 498:25 520:6,9 572:16 575:10 621:22 continued 528:20 572:16 continuing 528:24 contradict 616:8,22 617:12 contradictory 617:3 contraindication 546:11 contribute 535:18,19,21,22 contributing 437:17,22 438:4,15 438:18 439:2,5 441:18,22 442:12 442:13 510:7 522:18,20 523:1,3 523:14 557:17 572:12,25 584:17 604:11 699:19 700:12 706:19 conversation 590:2,19 592:6 587:8,9	594:11 copy 480:21 481:3 689:10 cornstarch 569:12,15 662:16 662:20,25 663:9 663:12,16,18,22 663:24 664:5,10 664:15 665:14 666:3 Corporate 430:8 correct 437:8 438:16 439:2 441:11 442:7,17 443:10 446:15 447:19 448:15,23 450:16 451:8,19 452:4 453:6 454:7 455:2,18 456:13 464:6 468:14 472:9 473:9 474:21 475:1,20 475:21 476:1,15 477:14 478:19 479:13 485:10 486:8 487:13,22 488:8,21 489:5,18 489:19 491:2 492:9,18 493:17 495:15 497:1 498:4,9 499:12,20 500:21 501:12 502:9 503:4,18 504:4,15,25 505:20 507:22 511:11 515:2 516:3 518:6,11,23 520:21 521:23 522:6 523:15 524:6,13 525:10 526:22 528:11,16 530:17 531:7 532:16 534:7 537:5 548:1,15 550:7 551:17,18	554:1 556:8,11 557:6,18 559:13 560:9,19 561:10 561:21 562:10,13 563:15,24 568:8 572:25 573:9 575:15 576:12 577:23 579:4 580:11 581:14,25 582:16 584:19 585:10 586:7 588:5,20 594:6,18 597:16 599:22 600:11 602:1 604:12,24 605:14 608:3 610:7,16 611:11,20 612:7 612:17 613:17 614:12 618:6,8,14 620:2 623:4 624:4 624:5,14 626:11 627:24 628:9 630:4 631:11 632:14,18 633:16 633:21 636:10,23 637:10 638:2 639:12 640:3 642:20 643:6,11 644:7,15 648:1 650:4 651:5,19,24 653:1 654:18 655:13,16 663:14 664:12 667:1 670:13 671:6,20 672:8,15 673:10 673:24 674:22 677:14 678:7 679:13 680:5,19 681:4,19 682:5 683:23 684:13 685:17 686:4,11 686:25 688:1 690:23 704:5,8,19 709:9,13,19 710:5 711:10 713:12 714:3,13 715:22 717:11 718:2,16
---	---	---	---	---

731:5 corrected 497:10 corrections 729:4,7 731:6 correctly 485:23,25 513:20 535:5 554:15 620:16 correlation 549:14 668:19 correspond 646:13 counsel 430:5,10,15,20 431:6 458:10 459:9,13,22 460:6 461:16,18 507:12 574:23 655:21 728:14,15 counts 472:22 couple 484:8 490:11 521:10 661:8 691:2 693:6 707:14 708:25 719:20 720:20 course 470:10 566:1 606:23 court 429:1,8,20 728:3 728:20 729:20 cousin 443:15 covered 604:21 688:8 Cramer 433:13 480:5,10,14 482:19 483:6 484:4,7,12,16,18 485:6,17 486:3,25 487:11,19 492:22 492:23 517:3 582:11 583:4 693:19	Cramer's 487:15 517:15 create 672:23 credible 702:13,18,25 criteria 509:9 critical 512:4 726:17 crossed 583:15 crosses 544:17 CRR 728:18 culture 706:8 cured 607:11,16 Curriculum 434:21 688:25 CV 688:11,19,21,22 689:11,15,24 690:9,18 CYNTHIA 430:7 cytokines 560:5 601:7,21 639:6	725:21 726:14,16 726:21 database 725:18 dataset 484:13 486:4 487:5 date 429:19 511:1 657:1 689:16,19 690:16 728:8 729:9 731:12 Dated 728:23 daughter 446:11 514:21 620:2,2,10,17 621:1 629:4,7 631:25 633:4,12 656:11 683:11 daughter's 510:12 566:4 617:23 624:18 625:1 Davis 434:11 640:17,24 643:9 646:2 648:7 705:10,13,15 day 511:2 585:21 586:2 586:3 632:3 633:5 633:8 724:19 731:16 day-to-day 509:25 696:13 days 704:5 707:14,18 729:16 death 551:3 576:21 584:6 585:4,9 632:2 633:4,7 data 479:19 480:2,4 483:7,8 486:25 487:4,11 493:9 572:4 712:5 714:23 723:5,17	602:8 deemed 729:19 deep 589:17 Defendants 429:13 430:20 431:6 defense 708:14 defer 563:24 564:1,6,17 deferring 564:13 defined 564:2 definitely 517:19 577:21 647:2 daughter's 433:9 452:14 511:1 definitively 685:6,14 degree 708:1 725:13 demonstrate 498:18 demonstrated 501:6 580:24 denies 444:23 depending 530:16 531:11 532:2 559:14 depends 555:12 581:8 DEPONENT 432:16 731:1 deposed 553:20 586:8 deposing 729:15 deposition 429:18 433:1,21 434:1,7,14 436:23 444:7 445:8 December 452:10,13 470:3	474:18 480:12 482:6 490:3 493:25 494:1,8 495:6,19 496:5,7 497:21,22 506:24 506:25 507:16 510:12,24,25 514:20 516:6 566:5 575:20 576:1,6 584:7 585:12,19 586:10 586:11 587:6,15 595:5,6 610:5,12 611:6 615:2,5 616:25 617:23 618:13,17,18,20 618:24,25 621:8 622:2 624:19 625:1,4 626:9 629:11 632:1 634:19 639:19 640:20,22 655:20 655:22,23,25 656:4 659:2 661:18,20 662:2 667:5 688:23,24 689:25 702:8 721:2 728:12 729:3,13,17,18 depositions 588:8 702:24 deposits 597:24 600:8 deps@golkow.com 429:25 dermal 497:5,6 describe 554:6 617:25 described 571:16,17 599:21 617:2 698:11 describes 454:11 596:24 598:17 614:6,11 describing 571:20 592:6
---	---	--	---	---

description 637:2	557:14 572:20 602:7 606:4,22	503:11,14 504:2 504:10,14,15,19	714:18	disprove 580:2
designed 669:17	608:20 613:3 629:13 704:17	504:24 505:5,12 505:18 511:20	discomfort 557:3,21	disputing 474:14,15,17,22
details 566:6,19,25 614:7 614:16 661:15 684:18	709:22 710:11 diagnoses 511:25 513:4	518:22 520:16 531:20 535:25 536:17 537:20	discount 572:10	distension 512:19
determination 493:21 549:6 570:9	704:3 diagnosis 465:20 466:10,16	539:25 558:4 569:9 570:1,5,6 571:8,12 583:8	discounted 463:16	DISTRICT 429:1,1
determine 509:9 510:19 518:15 583:23 584:1 618:4 631:21 676:4 679:5 682:1	467:25,25 468:22 468:25 469:6 509:21 511:7,14 511:19,24 512:5,6 512:9,10 513:19	629:6 630:21 651:12,13,15 652:16 686:19 725:15	discourage 666:15	doctor 445:2 447:22 457:6 458:25 481:12
determined 551:10 675:12,16 675:20 677:6	514:1,8 558:4 572:11 573:12 577:8 603:14	509:21 511:6,14 511:19,23 512:5 513:4,25 514:6,8	discover 547:8	487:9 490:8
determining 510:6 514:11 657:21 719:9	606:2 629:22 630:3,8,22,23 668:24 670:12	differentiates 598:13	discoverable 590:7,24 591:13,13	496:11 519:24
develop 552:1 570:11 685:17	683:16 697:5 704:14 709:11,16 710:4	difficult 491:15	discovered 504:14 672:7	520:12 525:1
developed 611:10,20 612:5,16 623:3 624:3,8	diaphragm 554:21	499:6 501:10	discrepancy 480:2	590:5 614:5 657:8 665:2 691:20
developing 454:14 455:1 524:13 525:10,19 611:24 653:19	die 607:25	540:25 541:18 618:10 687:10 688:2 697:1	discuss 498:6 541:21 674:18	700:1 715:6
development 572:12 579:3,15 600:2 613:23 632:25 637:14 638:10	diagnose 438:22 487:16 488:13 491:20 499:16 500:20	dig 470:9	doctor's 524:23 611:5	
develops 521:21 622:21	505:2 506:16 647:14,15 649:21	Diplomate 429:21 728:3,19	doctors 504:23	
diagnose 464:18,24 465:1,2 699:7 708:17	650:7 652:10 differences 499:5,20 501:9	direct 617:12 706:18	document 444:17 473:21	
diagnosed 440:20 464:4,15 465:12,19 466:22 473:8 513:20 556:17,20 557:5	505:2 506:16 647:14,15 649:21 650:7 652:10 different 483:18 496:13 498:7 499:17 501:21 502:9,13 502:23 503:1,7,7	directly 457:21 552:9 585:17	discovered 504:14,17 645:13 664:24 676:16 726:19	482:21 620:12 638:25 645:19 692:9 718:1
		disagree 507:11 539:23	disease 441:25 450:16 512:14 516:21	documentation 628:14
		541:4,17 590:9 591:12 648:6,13	540:7 556:1,4,5 602:22 603:25	doing 520:7 546:7 549:21 586:1 599:2
		648:24 649:1,6,7 649:20 650:2	606:20	603:21 729:8
		651:7 685:20	diseases 511:15 555:24	dose 705:14
		disagreement 665:20	disorder 666:25 667:6,13	dose-response 641:7 642:20,25 645:7 646:4 648:9
		discard 455:15	667:21,22 668:4	

668:10,20 669:2,9	522:7 523:4,16	634:4,10,13,16,24	DRINKER	658:25
669:15,18,21	524:8,19 525:2	635:3,17 636:8	drinkers	EASTERN
670:4	526:9,13,21 527:7	637:17 638:12,18	drinking	429:1
Dr	527:18 528:3	638:20 639:25	Drive	editor
432:10,12 436:12	529:4 530:7 532:6	640:9,14 641:10	dropped	692:20 719:21
441:12 442:8	533:2 534:19	641:14,19,25	driving	editorializing
443:12,17 444:4	536:3 537:17	642:3,5,18,23	due	723:11
447:6 448:3,8,10	542:4,23 543:15	643:3 645:14	duration	Edna
449:8,13,17,25	546:1,5 547:11	646:10 648:2	duly	656:15,25 657:3
450:5,10,17,24	548:9 549:10	649:4,17 650:5	dust	effect
451:10,21 453:7	552:7 553:18	651:6 652:9 653:2	541:24 546:4	704:8 723:18
453:25 454:8	556:18 557:19	653:10,16 654:8	dust	726:18
456:14 457:10,15	560:20 561:5,11	654:19,21 655:14	due	effects
457:25 458:12,15	561:22 562:14,20	656:6 657:24	499:4,20 501:8	562:16 665:15
458:22 459:16	562:24 563:17,25	659:15 663:2,15	554:13,24 617:5	eight
460:8,25 462:15	564:7,12,20	664:4,13 665:22	duration	478:12 479:6
463:2 464:5,9,17	565:17 567:4,16	666:13 668:6	dust	488:13 595:19
465:17,24,24	567:20 568:16,23	669:5,25 670:14	436:6 728:5	597:4 623:15,17
466:1,8 467:7,14	569:7,23 571:7	671:1,7,23 673:1	duration	623:19
467:16,20,21,23	572:14 573:1	673:25 674:11,23	either	
468:8 469:3,18	575:9 576:16	675:13,23 676:8	456:17 497:2,7,9	
470:10 471:20	577:1 578:5 579:5	676:12,18 677:7	500:6 515:1 532:1	
475:2,6,8 476:9	579:16 580:12	677:23 678:8,17	536:14 562:22	
476:14,22 478:20	581:7,19 582:3	679:6,14,19 680:8	599:20 627:23	
479:14 480:6	583:2 584:20	680:20 681:20	647:15 663:13	
481:18 483:10	587:4 588:6,21	682:6,23 684:14	669:18 671:5	
484:16,23 485:11	589:25 590:9,12	685:18 686:5,12	672:6 679:18	
486:9,12,17	590:20 591:6,22	687:1,7 688:10,15	Elbendary	
487:14 488:9	592:5,20 593:7,24	691:8,9 692:1,10	614:20	
489:6 491:19	594:17,22 595:4	693:1,16,19,22,24	electronically	
493:1,10,18	595:12,19 596:4,8	694:11,24 695:4,9	481:25 689:7	
494:24 495:16	596:15 597:7,11	695:14 699:11,25	elements	
499:13,22 500:9	597:21 598:2,15	700:7,20 701:10	598:9,21 599:14	
500:14,22 501:13	598:16 599:7,19	702:19 703:1,13	eliminated	
501:24 502:10	600:3,13,15	703:18,23 704:1	517:17	
503:5,19 504:5,16	601:11 603:12	704:11 705:4	ELLIS	
505:21 506:2,10	604:3,13 605:5,15	706:3,6,16 708:23	430:17	
506:24 507:3,16	607:1,18 608:4,14	709:14 710:6,8,21	employee	
507:24 508:6,22	608:22 609:5,11	712:9,23 713:13	728:13,15	
508:25 509:12	609:17,22 610:21	715:2,8,23 716:22	endogenous	
510:21 511:17	614:4,5,11,15,19	717:12 718:17,25	600:5 638:1,4,9,13	
512:1,7 513:8	614:20 615:20	719:13 721:14	endometrial	
514:3,16 515:1,3	616:10 617:1,6,12	722:7,14,22 723:9	444:24 472:20	
515:6,12,19 517:3	617:14,24 621:23	723:12,16,25	698:3	
517:7,15 518:17	623:5 626:21	724:10 725:4	endometrioid	
518:24 519:12,16	629:2,16 630:5,20	726:4,8,11 727:9	476:7 478:9 479:2	
520:1,8,22 521:24	631:24 632:19	727:18,21	488:18 490:25	

498:21 502:17	entire	especially	707:1,4 709:11	496:2,5 497:21,22
505:13 582:15	551:6 658:15 682:7	471:11 475:24	724:6	575:20 576:7
583:6 695:6	entirely	ESQUIRE	evidence-based	582:20 595:5,6
712:15 713:3,19	506:4 616:4	430:2,7,12,17	510:23	610:12 615:3,5
713:21 714:2	entrapped	431:2	exact	616:25 618:17,18
717:11 718:8,12	580:25 581:21	essentially	550:16 632:17	618:24 619:3
718:22 719:2,12	environmental	682:19	667:2	634:18,19 640:21
endometrioid-type	505:16 516:13	establish	exactly	640:22 655:22,23
583:10	epidemiologic	650:10	463:23	659:2 661:19,20
endometriosis	488:5 542:6 544:10	established	examination	662:3 667:4,5
438:8,12,15 461:23	550:9 584:11	562:9	432:8 436:9 662:5	688:23,24 689:25
462:4,6,9,18,22	585:5 632:6,24	estimate	691:6 709:3	691:13 703:14
463:11,20 464:5	epidemiological	551:20	722:12 728:4	721:1,8
464:10,16,19,24	724:1 725:14	et	examined	EXHIBITS
465:2,8,13,21,25	726:22	429:12 433:13,16	599:20 712:5,13	433:1 434:1 435:1
466:7,10,15,20	epidemiologically	433:19,23 434:12	714:23	exist
467:6,10,15	655:15 701:15	434:20 480:15	example	709:19
468:21 469:2,11	epidemiologist	482:8 490:5	502:24 503:3 504:3	exogenous
469:15,16,23	476:15	497:24 640:24	524:3 544:21	598:4,7,13,14,19
470:15,23,24	epidemiology	667:7	545:19 572:10	598:24
471:4,6,11,14,15	486:6 492:16 493:8	etiology	577:19 665:15	expect
471:17,25 472:5	498:7 541:22	569:20,21	examples	456:16 493:4
472:13 473:1,8,13	711:15,22 714:7	evaluate	551:12,13	568:10 576:4
473:15,19,23	714:20 723:5	595:2	exceptions	600:22 651:4
474:5,9,19,25	epithelial	evaluated	516:24	652:23 653:7,8
475:15,16,17,23	472:23 485:19	542:13	excerpt	654:14,23,24
476:2,6,24 477:17	501:22 502:8,13	evaluating	433:20 434:6,13	experience
521:14,17 532:21	507:19 566:24	510:15 623:25,25	496:6 618:19	690:3
533:21,24 534:18	570:2 605:25	evidence	621:9 655:24	experimental
535:10,22 536:20	682:12 684:5	459:11 486:18,20	656:3 662:3	540:22 541:8
536:23 537:12	695:11 713:1,16	exclude	expert	expertise
558:8 628:22	713:18 716:5,24	500:7 509:22,22	434:2,8 537:14	697:8
629:13,22 630:4,9	718:4,15 724:23	509:22 523:6	562:12,15 594:8	expires
630:12,22,25	725:1 726:2 727:3	541:6 551:10	594:12 595:7	728:22 731:17
675:4 696:6,9,14	727:8,16	562:3 567:11,22	634:20 695:23	explain
696:15,19,22,24	equally	570:22 586:20	696:9 708:14,20	559:18 653:6 654:5
697:7,10,17 698:8	553:2	589:4 600:15	explaining	565:18
698:12,17,22	ERIC	601:9,24 602:16	503:17 605:4	
699:3,5,7,8,12,14	431:2	602:22 603:10	exhibit	explored
699:17 700:2,3	eric.friedman@f...	627:25 629:21,25	436:23 437:6,16	
703:5 704:3,15,17	431:3	630:15,17 638:20	444:6,7 445:5,8	
704:21 705:7,9	errata	671:24 699:8,12	452:10,13,19	
707:5 708:17,20	432:15 729:6,9,11	699:16,23 700:3	463:10 470:3	
709:12,16,22	729:15 730:1	700:15 701:14,21	474:18 480:11,12	
710:5,12	731:7	705:9 706:25	482:5,6 490:2,3	
England	error			
479:20,22	486:2 495:5			

480:1	463:21 516:13,14	684:25 685:13,23	578:20 579:2,13	fellow
exposed	518:21 519:2,4,5	690:22	613:22,24 614:6,8	429:20 593:25
518:10 549:7 566:1	522:16 528:17	facts	614:11 615:13,19	728:2,19
566:11 584:2	531:23 537:4	593:2 658:22	617:18,19,25	fellows
631:21	540:20 541:7	FAEGRE	618:5,10 620:19	683:7
exposure	543:3,21 546:9	431:2	621:5,6 622:20,23	felt
492:17 548:14	576:20 577:13,15	fail	624:1 626:17,24	600:4 603:15
551:21,23 566:13	577:17,21 578:3,9	729:18	627:3,6,9,13,15	female
571:9,24 579:20	578:10 579:3	fair	627:22 628:1,2,10	665:16 696:21
580:4,8,10,14	611:4 613:9 618:5	439:6 441:23	655:19 656:14	females
584:15,19 587:2,2	622:19 624:1	463:21 487:9	657:3,22 658:14	580:25
587:11 631:17	627:9,23 632:25	523:3 527:2	658:15 659:12,18	fibers
632:11 633:19,25	657:22 658:13	531:16 536:24	660:14,19 661:5	515:7,12,24 562:3
675:3 682:1	659:13,14 660:15	544:15 545:17,18	671:20,25 673:5	562:3,7,20,25
700:10 706:8	661:6 666:12	553:5 565:14	679:25	563:18,18 567:24
722:25 723:4,20	669:3,22 670:11	607:17	family's	588:25 599:21
725:20 726:19,24	670:19,20,21	fairly	461:8	640:14
727:12	671:25 674:15,15	647:16	FAPR	fibrocystic
express	676:23 678:12	Fairmont	728:18	697:16,21,24
717:8,21	679:15,20,21	429:18	far	fibroids
expressly	680:17,17,22,24	falling	448:1 487:10 538:8	513:5
713:8 716:17	681:8,16,17 682:4	581:24	549:16 563:9	fibrous
718:11 719:9	684:24 685:4,7,15	fallopian	568:6,9 603:24	560:23
externally	688:1 698:7,17,19	552:18 595:24	606:10 607:3	figure
553:3	698:25 700:12	596:1 635:5,8,14	649:7,19 655:18	487:7 492:1 599:5
extirpation	706:19	636:22	664:5 669:17	614:24 637:9
696:20	factors	falls	fast	figuring
extremities	439:5 442:3 461:13	516:11,15 581:21	531:1 570:18	468:1
512:21 513:1	462:17 509:16,16	familiar	father	filed
<hr/>	510:14,15 511:20	452:6 497:12 498:2	619:8,9 620:19	436:16
F	512:11,16 514:14	504:12 580:20	621:4 622:10	financially
F1	514:20 520:16,18	640:16 641:2	father's	728:15
636:4	520:19 521:11,21	642:15 666:21	620:14,20,22 621:4	find
facial	522:17 523:13	family	659:20	439:16 465:4
455:7	529:12,18 531:14	437:25 438:2	fatigue	487:12 488:14
fact	533:16,16 534:6	439:10,17 440:24	512:24	490:20 491:5,7
438:14 443:11	535:25 536:17	441:2,9,14,17	fax	492:23 493:4,20
469:15 471:16	537:9,15,20	442:16,17 444:14	429:24	512:8,9 513:15
515:22 606:12,15	542:12,21 543:1,4	446:15 447:3,10	FDA	566:8 576:20
651:8,13 652:17	543:11,13,17,23	454:17,21 456:17	666:3	597:13 600:15
673:10 699:17	545:4 557:13	457:22 459:24	features	617:9 638:20
720:15	560:4 601:8,21	460:10 461:12	455:8	649:3 652:5,10
factor	612:1 639:6	522:24 523:10	feel	655:9 673:21
438:17,22 439:9,25	670:18 671:12	532:16,19 533:17	519:24 615:23	674:14 690:12
440:6,25 441:20	676:24 678:3	534:16 535:9,20	700:14	697:5 702:12,25
441:21 447:24	679:9,11 680:2	536:19,22 537:11	feet	715:20 716:20
462:4,6,9,22	681:7,17 684:19	543:20,23 574:2	455:9	718:11

finding 491:16 512:10 515:1,1,11 597:17 648:25 658:11 719:23	720:3 follow 722:8 follow-up 668:23,25 709:1	512:1,7 513:8 514:3,5,16 515:3 517:7 518:17,24 519:12 520:22,24	648:2 649:4,17 650:5 651:6 652:9 653:2,10 654:8,19 655:14 657:24	477:7 forth 576:5 610:11 614:10 641:3 728:9
findings 455:12 469:7,8 594:18,22 649:8 650:6 651:2 655:9 699:13	following 559:1 follows 436:7 forearm	523:4,16 524:8,19 526:9,13,21 527:18 528:3 529:4,23,25 532:6	664:4,13 665:22 666:13 668:6 669:5,25 670:2,14 670:16 671:1,7,22	found 471:5 474:20,24 475:5,10 485:8,20 487:20 488:12,15 490:24 491:24
finds 484:19	586:15 foregoing 728:7 731:4	533:2 534:19 536:3 537:17 542:4,23 543:15	671:23 672:10,17 673:1,25 674:11 674:23 675:13,22	493:17 503:14 504:8 547:1,4,18
fine 519:21 656:8	foreign 635:21,25 636:9,12	546:1,5 547:11 548:9 549:10	675:23 676:7 677:7,23 678:8,17	557:25 558:1 562:2,20 571:19
finish 609:8	636:16,20 637:1	552:7 553:18 556:18 557:8,19	678:19 679:6,14 679:19 680:7,8,20	588:24 596:8,15 597:3 599:12,20
first 437:5 443:15 446:8 447:7 470:18 502:1 508:13,16 519:20 538:21 539:2,5,10 546:21 575:23 596:5 610:2 619:2 625:21 699:22 703:24 706:4 709:6 725:12	form 441:12 442:8 443:12,17 447:6 448:6 449:12,18 450:5,10,17,24 451:10,21 453:7 453:25 454:8 456:14 457:15,25 458:12,16,22 459:16 460:8	558:16,21 560:20 561:5,11,22,24 562:14,24 563:8 563:25 564:7,9,12 564:20 565:16,17 567:4,16 568:16 568:23 569:7,23 571:7 572:14 573:1 576:16 577:1 578:5,23 579:5,16 580:12	681:20 682:6 684:14 685:18 686:5,12 687:1,7 691:17 692:25 693:4 694:7,20 695:7 699:21 700:17 701:4 702:14,23 704:9 705:1,24 706:9 709:14 710:6,20 710:21 712:9,23	599:23 602:21 606:12,14 618:9 632:6 635:17,21 636:2,9 644:12 645:6 652:3,12 667:17 668:2 669:15 674:2 682:3 702:17 716:1 717:9,24
first-degree 440:11,14,15,18 441:9 627:14,18 627:21	462:15 463:2 464:17 465:17 466:1,8 467:7,16 467:20 469:3,18	581:7,19 582:3 584:20 587:4 588:6,21 592:21 593:7 597:7,21	713:13 715:23 716:22 717:12 718:17,25 719:13 721:13,14,24	foundation 562:8
fit 606:1 709:8,24	471:20 478:20 479:14 480:6	598:16 599:7 600:3 603:12	723:23 724:5,14 726:1 727:4,17	four 549:24 684:8 685:4 705:22 707:8
fits 648:15 681:8	483:10 484:23	604:3,13 605:5,15	731:6	fourchette 662:7,8
five 501:20,21 502:4,7 502:14,14 520:15 549:20,24 609:18 621:21	485:11 486:9,12 486:17 487:14	607:1,18 608:4,14 608:22 610:21,23	formed 515:14	fragrance 568:13 569:11,14 589:2
Floor 430:19	488:9 489:6 491:19 493:1,10 493:18 494:24 495:16 499:13,22	611:13,22 612:9 612:19 614:15 615:20 616:10 617:14 623:4,5	former 683:4,7	fragrances 568:21 569:5 588:15
flora 619:18 666:19	500:9,22 501:13 501:24 502:10	624:4 626:20,21 627:12 629:2,16	forming 542:2 595:13 633:2 634:10 637:6	Francis 619:20
Flower 430:18	503:5,19 504:5,16 505:8,21 506:2,10 508:25 509:12	629:18 630:5,7,20 631:24 632:19 634:4 637:16,17 638:12 641:10	forms 563:6 588:9	FRCP 728:11
folks	510:21 511:17	645:14 646:9,10	formulating 721:20	free 467:21 603:24

646:5,14 647:15	516:9	580:16 610:4	genetically	541:21 550:20
648:10,17 649:7	Garber	691:11 707:15	654:24	606:21 611:25
649:13,19 650:3,7	430:7 505:7 506:11	708:5	genital	618:6 626:17,22
650:11,13,17	507:4 508:1 514:4	generalize	433:14 434:10	647:20 671:11
705:17,21,25	520:23 522:8	560:14	477:22 478:3	694:6 708:1
frequent	529:20,22,24	generalized	482:7 547:17,19	714:10,14 727:10
647:18 691:16	530:4 538:1,3	512:20	549:2 552:9 580:3	731:5
692:17	557:7 558:15,18	generally	580:11,14 633:5	gives
frequently	558:20 561:23	468:16 504:13	636:21 640:23	463:24 619:14
555:1 603:4 654:15	563:7 564:8	511:2 519:5 520:2	643:19,23,25	622:9 632:23
FRIEDMAN	565:15 590:10,15	529:1 553:8,19	644:9,18 645:9	giving
431:2	590:22 591:2	555:10,15 556:15	646:5 648:10	591:1 592:19 681:4
front	610:22 611:12,21	558:5 559:9	649:14 650:20,22	gleaned
436:24 440:21	612:8,18 626:19	570:20 572:15	651:22 694:19	590:19
443:23 481:15	627:11 629:17	577:22 604:7,16	genome	gloves
575:18 617:16	630:6 637:15	623:24 625:7	543:22	558:12,13 666:3,7
625:4 634:25	641:17 646:8	643:6,7 690:7	geologist	go
689:8 711:3,11	670:1,15 671:21	697:9,11,12 698:7	562:10 563:24	444:13 449:15
full	672:9,16 675:21	698:16	564:6,18	485:17 487:10
703:24 725:12	676:6 678:18	genes	Georgia	498:14 519:15
fumbling	680:6 710:19	457:20 504:14,17	430:14	520:12 526:24
482:23	721:12,23 724:8	504:19	germ	537:22 538:12,13
function	724:15,17,19	genetic	497:7 701:23	539:16 562:21
512:25	Garber's	438:1 441:1 442:1	germline	575:5 580:5
further	582:10	447:5 448:12,23	626:16 628:9,12	591:25 609:4
540:15 581:18	garber@onderla...	450:3 453:5 456:3	getting	619:16 641:7,15
582:1 688:5 691:1	430:8	458:4,17,18,20	458:7 460:3 473:1	645:20 655:19,20
708:24 712:12	Gardner	459:25 502:24	474:10 612:22	668:22 674:12
722:5 727:22	464:5 465:24 468:8	503:2,6,9,13,25	626:1 656:7	702:2 726:5,12
728:7,10,13	GARRARD	504:2,6,7 505:18	GI	goal
Furthermore	430:12	505:20,23 506:4	505:10	512:8,10
712:3 725:20	gene	516:25 517:9,21	gist	Godleski
future	448:14,15,25 450:6	531:12,18 532:2,9	692:24	434:2,8 515:1,6,12
451:1	450:11,19 451:6	532:20 543:24	give	515:19 562:20
<hr/>				
G	451:18 453:1,6,9	569:25 570:5	468:13,17 482:24	594:17 595:7,19
G	457:5,5 459:3,5	604:17 605:9,12	490:17 500:6	596:8,15 597:11
436:2	459:11 460:13	624:16 625:14	521:13 535:24	598:2,15 599:19
Gallardo	461:10,12 524:20	626:2 627:1,6,7	565:8 614:7	600:13,15 634:13
548:21 562:1	525:3,8,15 526:14	651:13,15 672:6	625:23 633:22	634:20 635:3,17
582:10 612:13	526:15,25 527:14	672:12,13 673:9	637:2 645:16	638:20 640:14
671:10 684:10	527:22,23 529:5	673:12,16,18,20	659:17 677:8	699:11
699:2,16 705:5	530:12 532:14	673:23 674:1	687:6 701:1,5,22	Godleski's
Gallardo's	672:3,3,6,24	676:22 677:19	724:13	563:17 594:22
702:4,5,6,9 706:19	general	678:2,10,12 684:1	given	595:4,12 596:4
707:1	437:7 470:1 471:15	685:15 686:10,25	441:9,13 442:6	634:10,16,24
game	472:17 474:11	687:9,19,24,25	518:14,18 539:18	636:8 638:18
	485:18 575:24	707:2	540:10,16,19	639:25 640:9

going	442:22 444:22 445:17 614:2,21 614:25 615:14,25 616:3,8,23 617:13 617:22 618:15 621:19 622:11 626:23 627:17 628:6 656:22,23 658:4,20,23 659:5 659:10,18 660:1 660:12,18,21	gynecological 470:22 703:5 gynecologists 696:17 H half 474:6 544:18 589:16 592:9	722:8,16 724:2 726:18 727:14 healthy 458:7 460:3 670:6 hear 563:13 hearing 576:5 610:10 720:24 heart 453:21 455:5 heavy 560:17,24 561:18 hand 470:4 handed 618:23 hands 455:8 Hang 458:15 happen 456:15 476:4 558:2 555:19 happening 555:19 happy 494:15 hard 493:20 499:23 551:3 627:2 699:24 Harlow 693:22,24 hazard 471:12 head 455:7 477:8 531:2 726:15 health 562:16,16 669:13 694:14,17,22,25 695:5,10,15,23 710:14,15,15	671:13,17 672:18 Hill 492:12,16 508:23 509:1,9,20 510:2 histologic 477:21 485:19 496:13 498:8 501:22 502:7 504:15,25 638:24 history 437:25 438:2,7 439:10,17 441:2,9 441:14,17 442:16 443:10,13,22 444:15,23 445:4 446:14 447:4 held 429:18 help 450:19 615:18 620:5 helps 504:23 hereditary 672:3 677:19 hereinbefore 728:9 high 454:13 475:24 527:15 725:13 high-grade 614:6,9,12,16 615:13 616:24 617:18,19 618:4,5 618:10 621:5,6 622:20,23 624:1 626:17 627:3,6,9 higher 627:13,22 628:1,2 628:10 629:12,21 628:11 647:1,2,18 648:17 652:18,21 652:25 653:9 654:2,16 highest 660:15 661:5 671:10 648:16 highly 672:19 673:6 674:14 679:25 666:14 669:10
gold	570:17	Hang 458:15	500:19 615:18 620:5	461:8,12,22,24 463:24 464:10
GOLKOW	group	happen 456:15 476:4 558:2 555:19	helps 504:23	467:5,14 468:13
429:24	483:20 545:15	happening 555:19	hereditary 672:3 677:19	468:18 509:17
Gonzalez	606:3 652:17,23	happy 494:15	hereinbefore 728:9	514:19 515:17
434:19 666:24	653:7 654:12,13	hard 493:20 499:23	high 454:13 475:24	522:23,24 523:10
667:7	654:14	551:3 627:2	527:15 725:13	532:16,19 533:17
good	groups	699:24	high-grade 614:6,9,12,16	534:2,16 535:9,21
436:12,13 508:7	652:16	Harlow 502:16,25 503:10	615:13 616:24	536:19,22 537:11
540:21 541:8	grow	504:1,9,18 505:13	617:18,19 618:4,5	543:21 576:20
547:9 570:13,22	570:16	569:21 570:3	618:10 621:5,6	578:21 579:2,14
606:19,25 607:15	growing	606:2,10 646:18	622:20,23 624:1	586:13 613:22,24
670:5 700:1	570:17,18	647:7,10 648:18	626:17 627:3,6,9	614:6,9,12,16
701:12	grows	higher 472:4,16,16 474:11	627:13,22 628:1,2	615:13 616:24
Gorlin	570:15	628:11 647:1,2,18	628:10 629:12,21	617:18,19 618:4,5
433:9 452:7,12,14	growth	648:17 652:18,21	630:1,11 632:23	618:10 621:5,6
452:22,25 453:10	560:4 601:8,21	652:25 653:9	655:19 656:14	622:20,23 624:1
454:6,11,22	639:6	654:2,16	657:3,22 658:14	626:17 627:3,6,9
455:13,14 456:12	guess	highest 660:15 661:5	658:16 659:13,18	614:6,9,12,16
456:16,18 457:1	520:12 534:24	671:10 648:16	660:15 661:5	615:13 616:24
457:13,17	538:17 542:15	highly 672:19 673:6	671:20,25 672:11	617:18,19 618:4,5
gotcha	545:8 559:11	607:25 612:23	672:19 673:6	618:10 621:5,6
539:9	579:6	666:14 669:10	674:14 679:25	622:20,23 624:1
gotten	gunshot		682:7 683:15	626:17 627:3,6,9
547:7 576:14,25	622:16			
610:19	guys			
grandfather	508:9			
620:11	gynecologic			
grandmother	464:9 467:24			

699:13 709:20 710:10 histotype 650:24 histotype-specific 644:2 histotypes 499:2 501:7 646:20 647:8 hit 527:3 528:18 531:18 532:20,22 hits 532:1,3,12,18,22 hold 481:19 home 587:8 624:20 631:9 homogeneous 654:25 hope 608:23,23 hopefully 449:23 hormone 521:8,16 522:24 523:11 532:15 679:25 Hotel 429:18 house 587:9,16,17,18 Houston 620:1 human 543:22 555:11 600:22 723:1 727:14 humans 684:5 hundreds 687:16 husband 573:21 586:10 587:15 593:17 Huston 434:6,13 618:19,25	620:18,25 622:5 655:24 656:4,10 Houston's 626:9 hypothetical 458:16 460:9 484:9 484:25 485:3 486:11 520:15,20 521:1,5,12,20 545:8 551:13,14 657:13 658:9 659:9 660:7 hypothetically 466:19 486:1 611:18 639:24 657:15 658:21 659:23,25 hypotheticals 557:9 hysterectomy 438:10 460:23 462:12,24 463:12 585:1 <hr/> I IARC 563:1 564:1,13,24 566:16 IBS 513:11 idea 501:25 636:15,25 638:8 identifiable 537:3 identification 444:11 445:12 452:16 480:15 482:9 490:6 496:8 497:25 595:9 615:8 618:21 634:22 640:25 656:1 661:24 667:8 689:1 identified 448:13 534:2 542:22 543:14	546:21 670:19 726:17 727:14 identify 437:21 451:6,18 514:1 532:24 543:23 605:20,21 616:21 675:8 676:25 678:2 679:8 II 572:6 iii 722:17,18,20 illness 511:21 imagine 699:25 immediately 519:18 impact 447:13,18 460:15 587:23 674:3 700:5 imperative 729:14 implies 604:17 important 468:1 492:3 573:2 618:3 impossible 521:22 632:18 inability 540:16,19,24 541:13,21 542:19 identification 444:11 445:12 452:16 480:15 482:9 490:6 496:8 497:25 595:9 615:8 618:21 634:22 640:25 656:1 661:24 667:8 689:1 identified 448:13 534:2 542:22 543:14	463:20,25 464:1 492:11 512:19 708:13 717:2 724:4 725:24 726:3 727:2,6,15 included 452:3 476:17 696:1,3 704:25 705:3 709:12,25 713:17 714:18 717:16,18 718:6 718:19 720:5,15 723:21 724:23 725:2 includes 715:17 726:2 including 598:5,20 635:25 685:13 695:15 716:11 718:7 incomplete 458:13,16 460:9 inconsistent 614:1 711:16 714:7 714:20 increase 460:11 478:24 527:15 533:17 539:18 540:10 544:2,6 577:22 613:16 666:20 increased 441:8,15 446:21 451:2,24 454:22 461:5,14 471:6,18 471:24 473:17 474:20,24,25 475:19 478:10,14 478:18 479:12 488:16 490:24 524:6,16 525:16 525:20 530:16 531:5 540:8 628:3 include 455:7 462:8,21	650:7,8 658:17 667:23 668:3 693:14 increases 440:12 441:2 449:1 451:7,18 459:11 469:19 476:3 496:12 528:7 530:14 540:4 577:24 632:8 677:11 679:21,23 Independent 538:22 539:11 INDEX 432:1,21 Indiana 431:5 Indianapolis 431:5 indicate 532:19 602:25 614:20 723:2 726:22 indicated 587:10 699:14 708:6,11 709:21 indicating 710:4 indication 455:11 540:25 541:14 629:14 indicative 598:4 635:25 672:23 723:18 725:21 individual 503:8 509:6,10,14 510:1,20 518:15 519:10 526:5 528:15 529:16 531:9,19 537:18 537:20 546:9 552:23 572:9 584:22 588:14 686:20 708:9 individually 716:10
--	---	--	---	---

induce	659:16,17 660:20	intercourse	554:11	602:7,17 606:1,24
505:17,19	661:4 668:15	697:14	JAMA	612:14 683:5,6
induces	669:23 705:20	interested	692:20	684:10
505:23 556:7	708:4,9 720:25	728:15	Janssen	Judkins'
infancy	722:3	interleukins	554:19	575:14 576:10
549:12	ingredients	560:4	January	577:4,10,12
infant	569:12,15 588:17	Internet	493:25 494:8 496:3	579:13,20,24
549:15	588:18 589:2	726:8	602:12 689:12,16	584:18 588:1,20
infection	665:13	interpretation	Japan	589:5 593:17
513:13 666:20	inhalation	474:16	572:6	594:4,18,23 595:4
669:13	548:21,25 549:3	interrupted	jaw	595:20,24 600:2
infections	580:1,9	550:14 676:17	453:21	603:10 608:11
544:5 664:12,16	inherited	Interruption	jaws	July
infertile	455:15 456:3	487:1 664:22	455:5	602:21 603:8
521:14	457:24 517:12	interval	Jenga	June
infertility	523:22,24 526:14	472:8,11 544:17	516:9 527:1	602:13,14
521:18,19 675:5	543:24 604:17	intervals	JERSEY	jury
697:15	605:1,9,12,17	583:14	429:1	516:2,8 565:4,8
inflammation	611:2 626:16	intervention	job	<hr/> K
555:7,11,13,15,22	627:7 628:9	460:20 466:11	535:2	karyotypes
555:23 556:8,24	672:13 673:12,13	intraperitoneal	jobs	687:18
557:2 559:12,15	673:15,16 675:2	606:16	689:22	keep
559:18,19 600:16	676:22 677:11	introduced	Johnson	482:23
601:19 602:4	678:1,20 684:23	554:8	429:4,4,12,12	keeps
638:21 639:4,14	684:25 685:3,6	investigation	430:20,20 431:6,6	687:21
639:16,22,23	687:13,24	565:24 587:1 599:4	554:20,20,22,22	kidney
663:10,11,13,14	injuries	637:8	567:20,21 699:15	578:25 579:9
663:17,23 664:1,2	527:8 529:9 532:8	involved	699:15	kill
664:6 665:16,24	532:12 572:16	573:11 597:16	Johnson's	456:23
inflammatory	578:18 681:11	iron	585:22	kind
532:21 554:7,14	injury	638:14	Join	587:6 597:19
555:1,5,18 556:1	527:3 528:21,25	irregularly	508:1	660:25 705:3,6
556:3,4 557:15	insinuate	662:9	judgment	Kleiner
558:7,14,17 559:3	488:1	irritating	693:9	477:4 516:2,8
559:8,24 568:20	Institute	589:2	JUDITH	526:25
569:4 600:24	452:11,24 453:12	irritation	429:18 432:2,8	knew
601:1,6,10 639:11	454:10	665:16	436:5 728:5 731:4	442:1 459:2 533:8
663:1 664:8 666:4	instruct	issue	731:12	543:20 660:17
684:20	590:13 591:9	513:18 587:17	Judkins	know
information	Instruction	720:11	434:3 575:19 576:5	438:11 439:9
456:4 464:14 492:7	432:22,23	issued	576:13,18 577:7	440:19,19 448:16
506:19,20 590:5	INSTRUCTIONS	575:13	578:12,20 583:25	454:5 459:1
591:14 613:14	729:1	issues	584:2 585:3,8,14	463:25 468:5
620:7 624:10,25	insufficient	627:5	586:12,21 587:1	475:22 486:15,24
625:23 628:4	550:21 700:15	<hr/> J <hr/>	587:15 589:12,14	489:16 490:18
631:7,14 643:18	intend	J&J	590:3 592:7,8,14	491:7,20 493:11
657:20 658:1,10	580:5,7		593:11,14 595:8	

494:10,22 496:18 496:24 499:25 502:5 506:14,18 508:3,6 514:7 516:23 517:5,11 517:13,19,21 518:1,4 519:9 520:17 524:4 530:14 532:17 534:20,21 536:14 537:14 542:20 545:24 549:20 551:12,19 553:12 561:18 562:6 565:11 566:5,8,18 566:20,21 567:19 568:6,9 569:3,11 569:14 570:24 572:24 584:15 591:5 593:4 594:9 595:1 597:19 598:12 599:10,13 604:5,19,23 618:1 619:11,22 621:18 623:2,8,21 625:17 625:21,22,25 626:12,25 630:15 631:5,10,11 632:22 637:18 644:11 654:4,17 655:1,5,6,11 659:1 668:16 671:11 677:18,21 678:6,22 680:11 684:11,15 685:23 686:14 687:11 690:18 692:5 700:1 709:9 719:1 720:24 721:7,21	known 457:4 472:13 542:12 543:18 544:1 547:16 637:21 671:12 677:10,19 680:24 681:8 knows 724:18	433:4 444:9 LBONDURANT... 433:5 444:10 lead 442:3 681:11 700:11 learn 591:4 592:18 learned 544:3,4 590:16 591:7 learning 452:22 454:6 leaving 524:20 711:25 led 578:19 687:20 725:2 laparoscopy 465:5 laparotomy 465:5 large 455:7 505:19 largest 489:12 lasted 591:17 592:11 late 556:17,20 557:14 557:25 558:1 latency 571:3,16,22,23 572:1 lawsuit 553:25 LAWYER'S 432:17 732:1 lawyers 592:7,13 lay 562:7 LBONDURANT... 433:7 445:10 LBONDURANT... 433:8 445:11 LBONDURANT...	559:15 584:14 LIABILITY 429:5 lie 554:4 life 551:6 566:5 lifetime 441:3 524:12,16 525:9,16,19,20,20 525:23 528:23 530:15 566:2 ligation 633:15 limited 488:20 644:4 712:1 line 490:22 496:16 507:17 619:6,6,17 656:5 730:2 732:3 lines 490:11 list 454:20 511:14,20 512:25 564:14 574:10 721:10,22 listed 462:18 494:4 listing 690:1 lists 638:13 722:2 literature 475:23 476:22 477:16 510:18 527:9 542:7 550:9 584:11 585:5 604:16 605:18 632:24 678:21 723:1 LITIGATION 429:6,24 432:21 letters 692:19,24 693:3,6 693:18,20 694:4,9 719:21 level 523:13 555:17	722:8 live 587:7 lived 578:7 lives 613:18 living 619:19 LLC 430:7 Lloyd 593:24 LLP 430:17 431:2 local 555:8 localized 560:2 logarithmic 570:16 long 452:22 499:10 543:6 547:15 570:14 571:9,10 571:18 581:8,21 589:18,21 724:19 726:19 long-term 528:20 587:11 longer 613:18 look 440:21 445:23 446:8 451:23 465:3 470:8 471:1 473:25 485:15 490:9,21 491:6 503:8 509:15 511:2 545:3,13 546:10 562:21 563:16 566:19 574:18 580:17 582:17 596:13 613:8 622:2,22 623:24 626:3 648:14 650:18
---	---	--	--	---

655:20 667:11	665:2 667:18	442:20,23 444:21	margaret.thomp...	621:19 659:19
668:8 669:7	689:16 691:12,21	444:23 445:15,17	math	531:1 549:22
672:22 673:6	692:5,11 703:12	447:1	matter	551:25 552:5 576:5
688:11 691:16,18	711:9,18 715:15	Lynda	610:10 653:1	610:10 653:1
705:13,15 713:4	715:16 716:9,10	436:15	686:6	686:6
713:23 714:11,15	717:1 720:13	M	McTiernan	476:14,22
715:11 719:14	looks	M	McTiernan's	476:9
722:15 725:5,7,8	509:1	M.D	MD	445:6
726:7	Los	429:18 430:2 432:2	MDL	429:4 433:20
looked	430:19	432:8 436:5 728:5	493:25 496:2,6	493:25 496:2,6
470:2,15 471:3	lot	731:4,12	610:4	610:4
478:12 479:1,6	474:12 549:21	macrophages	mean	449:3 458:25
483:21 488:25	557:9 558:9 572:4	559:25 601:3 602:3	471:23 472:14	471:23 472:14
490:16 491:23	574:15 599:8	Mae	483:17 505:19	483:17 505:19
498:12 510:24	loud	619:17,20 656:20	509:3 515:24	509:3 515:24
514:13,17,20	530:8	magnesium	519:14 520:6	519:14 520:6
527:6 537:2	LOUIS	598:5,18 599:9	527:11,13 546:25	527:11,13 546:25
541:21 550:10	429:8	637:4	552:8 553:25	552:8 553:25
551:9 553:6	low	main	556:12 557:12	556:12 557:12
566:20 593:4,6	493:14,19 512:23	501:21 502:7,15	marketing	560:18 564:13
595:19 597:4	538:25 539:17,18	majority	496:1	601:6 605:4
628:5 634:13	540:10 611:25	604:22,25 605:8	mass	624:21 638:5
635:3 642:12	698:21 712:2	674:20 675:10,18	440:5	639:23 651:10
646:11,13,14,16	low-grade	676:3 677:4,17,21	masses	652:20 653:25
647:5 658:25	502:16 504:9,20	679:4 697:20	440:3	668:17 673:10,11
662:22 668:12	505:11 570:3	698:2	material	678:22 679:17
687:17 691:19	lower	makeup	598:5	680:4,17 687:4
705:18 713:17	655:2 662:6	651:15	materially	696:10 709:10,19
719:15 725:10	lumped	makeups	650:24	711:3 712:14
looking	478:8	651:13	materials	719:7
444:14 463:7	lunch	making	574:9,10,22 603:22	meaning
479:10 482:20	575:2	449:15 530:2	721:5,9,22	600:5 605:19 638:6
483:2,11,13,14,25	lung	553:11 563:12	maternal	723:5
484:12,22 486:3	442:25 444:20	629:15,20	439:11,19 441:10	means
489:1 490:10,10	445:18 446:6,6,25	malignant	442:22 443:4,6	456:3 471:21
490:13 509:13	447:8,16	706:7	444:18,21,22	530:18 541:12
511:19 539:1	Lydia	man	445:13,14,16,16	604:4,18 635:15
546:8 554:17	434:6,13 618:19,25	468:5 538:17	445:17 446:1,2,10	678:20
583:8 584:11	620:1 655:24	manage	446:18 458:5	meant
596:3,17 613:10	lying	696:14,21	460:1 578:24	475:13 494:15
622:19 629:23	466:12	manner		
635:9,10,22	lymph	570:16		
638:23 643:17,19	595:25 635:5,15	MARGARET		
644:23,25 645:12	636:4,23	430:2		
645:15 647:4,9	lymphocytes			
648:15 651:18	602:3 639:1,20			
658:13 662:4	lymphoma			

496:21 497:3	447:15 586:16	473:12 474:8	502:12,22,22	512:16 513:13
696:12	587:14	Mills	moment	532:22 605:21
mechanism	mentioned	492:21	544:9	630:2 676:19,23
568:21 569:4	491:9 600:7 601:20	mind	Montgomery	681:10 684:4
median	656:18	447:8 722:10	430:4	687:19
668:24	Meridian	mine	month	multiplied
medical	431:4	593:25	497:16	549:23
433:3,6 434:4,15	mesothelioma	mineral	months	multivariant
444:3,8 445:9	566:22	564:5,19	668:11,13	546:10
452:21 465:16	meta-analysis	mineralogist	morning	mutated
467:22 468:13,17	489:17 641:3	564:11,18	436:12,13 495:2	504:14,18,20
477:9 502:5	726:21	minerals	499:10	mutating
510:10,18 514:17	metal	563:22	mother	687:21
514:19 540:4	568:13	Minnie	439:14,20,21	mutation
545:12 574:19,21	metals	619:18	440:18,19 444:19	448:23 450:4,12,15
586:17,20 588:8	560:17,24 561:18	minute	456:7,17 458:5	452:25 453:5
615:3,6,11 656:14	565:6,12 567:3	481:20 482:24	460:1 621:15,19	457:4,23,24 458:4
657:3 659:5	568:21 569:5	591:23 645:16	622:11,15,21	458:18,18,20
661:21 662:3	588:15,25 598:8	minutes	623:1,12,14,22	459:25 505:20,23
678:21 683:15	598:20 599:10,11	508:8 589:22	624:3 626:9 631:2	518:7,8 523:22,25
708:1	599:11	591:18 592:12	mother's	524:20 525:4,9,12
medically	metastasized	609:18 621:21	579:9 622:6,10,10	525:13,15 526:7
696:14 697:3	603:11,15	Miriani	624:7	526:14 527:1,14
medicine	metastatic	614:4,5,11,19	motion	527:23,23 528:22
510:23	701:25	Miriani's	449:20	528:24 529:6
medulloblastoma	methodology	617:24	mouth	530:12,17,19,22
454:18	491:14 510:6,19	misreporting	467:9 533:9	543:24 605:2,9,12
medulloblastoma...	514:11 522:14,21	484:15	move	611:2 626:16
455:1	553:14 586:5	misrepresentation	449:4,8 455:22	627:1,7,7 628:9
medulloblastomas	methods	530:5	457:6 692:12	628:12 672:3,3,6
453:18	487:7 668:9	Missouri	mucinous	672:13,13,25
meet	Michael	429:8 615:10 659:4	490:25 494:11,20	675:2 676:22
573:18 574:1	429:20 430:17	misspoke	495:12 496:20,25	677:11,19 678:2
meetings	728:2,18	494:13 495:6 497:8	499:2 501:7,16	678:10,12 684:24
594:1	michael.zellers@...	616:20 663:7	502:17 504:8	685:15 686:25
member	430:18	misstate	505:9 506:9,13,21	687:13,24,25
626:25	middle	616:16	507:2,7,20 508:4	707:2
members	530:25 595:17	misstates	534:3,4 714:2	mutations
440:24 454:17	609:13,15	495:17 507:5	717:20,25 718:8	446:24 450:21
627:15	migration	588:22 607:19	718:12,22 719:2	461:12 502:25
men	548:15 549:3	676:18 710:8	719:11	503:2,7,9,13,25
451:25	552:17 579:21	724:6,6	multifactorial	504:2,6,7 505:18
menarche	631:18	mistake	441:25 512:15	506:5 516:25
549:17	Miller	497:4,4	516:3,21 523:18	517:10,11,14,21
menses	429:20 728:2,18	model	674:13 675:1	527:8 531:12
697:13	million	540:22 541:8	multiple	532:14,17 570:5
mention	472:12,25 473:12	molecular	457:16 477:23	572:17 577:23,25

578:8,13,14,15	514:24 519:24	Newport	598:9,21 599:14	numerous
613:16,19 626:3	520:8 532:1	430:9	nonresponsive	447:4 654:10,22
673:9,12,17,19,20	544:24 565:2	next-to-the-last	449:5 455:23 457:7	673:2
673:23 674:1	578:23 582:12	722:24	nonserous	nurse
684:1,4,12,17,20	601:19 621:21	Nicholas	479:1 488:17	662:15,19
684:23 685:7,10	630:18 631:3	538:18,19	nonsmall	
685:22,24 686:3	650:11 658:1,10	nickel	444:20	O
686:10,15,23	660:23 661:4	588:25	nonspecific	O
687:9,12,19	681:11 689:4	night	513:16 558:2	436:2
Mutch	699:22 700:4	470:20	647:16	O'Brien
699:25	720:10	NIH	nontalc	492:20 493:23
<hr/>				
N	needed	452:11	598:5	497:14 498:11,13
N	669:24	nine	normal	501:3 537:25
430:1 431:1 432:5	needs	637:3	529:6 581:1 666:18	662:23 665:6
436:2	528:1	nineties	North	691:12,15 692:21
name	negate	577:20	431:4	694:6 719:20,22
477:7 563:23 622:9	515:13	ninety	Notary	720:15
named	negated	577:19	429:21 728:4,21	O-C-A-C
470:18	554:4	node	731:20	485:20
names	negative	635:6,16 636:5,23	notation	oath
619:12,15 622:6	438:1 441:1,7	nodes	621:14	553:20 554:3,5
Narod	624:19 626:10	595:25	note	586:9 629:4
720:12	628:23 630:16,18	Nods	444:4	702:15
National	631:2	726:15	noted	obesity
452:11,24 453:12	neither	non-coffee	727:25 729:11	521:9,17 522:25
454:10	454:16 465:23	545:22	731:7	523:12 532:16
natural	466:2 583:17	non-Hodgkin's	NOTES	543:7,8
511:4	674:19 699:11	442:20 445:17	432:17 732:1	object
NCI	728:13,14	447:1	November	441:12 442:8
433:9 452:14	neutral	nonasbestiform	444:4	443:12,17 447:6
NCRA	613:13	562:23	nulliparity	448:6 449:11,18
728:19,20	never	nonasbestos	675:5	450:5,10,17,24
near	497:6 515:21 536:6	563:5,23	number	451:10,21 453:7
662:6	542:24 576:13,14	noncancer	433:2 435:2 463:8	453:25 454:8
nearly	576:24,24 577:3	455:4	482:13,17 483:12	456:14 457:15,25
547:3	594:3 610:18,19	noncancerous	483:15 484:3,15	458:12,15,22
necessarily	611:9 629:19	453:20	486:4 489:13	459:16 460:8
442:4 542:25	683:18,21 722:10	nonfibrous	490:17 495:9	462:15 463:2
600:20,25 639:5	nevoid	596:20,25	517:25 530:25	464:17 465:17
651:4,10 652:19	455:20	noninherited	531:12 574:12	466:1,8 467:7,16
680:3	new	604:18 605:19	582:20 605:13	467:20 469:3,18
necessary	429:1 451:6,18	675:3	619:14 632:21	471:20 478:20
729:4	479:20,22 494:18	nonirritating	650:19 679:12	479:14 480:6
need	508:8 534:12	554:12,24	680:2 711:6 726:6	483:10 484:23
448:7 481:5 490:9	543:12 583:24	nonmalignant	numbers	485:11 486:9,12
500:3 507:13	690:12 699:16,23	439:22 444:19	493:2,5,15,19,21	486:17 487:14
	708:4,8	nonmetallic	494:25 583:19	488:9 489:6

491:19 493:1,10	610:21,22 611:12	724:5,9,13,14	oh	696:24
493:18 494:24	611:21 612:8,18	726:1 727:4,17	ONDERLAW	430:7
495:16 499:13,22	614:15 615:20	objections	one-year	668:13
500:9,22 501:13	616:10 617:14	724:21	668:13	
501:24 502:10	623:5 626:19,21	observed	675:2	
503:5,19 504:5,16	627:11 629:2,16	540:21 541:1,18	ongoing	
505:7,21 506:2,10	629:17 630:5,6,20	obstetrician	557:16	
506:11 507:3,4,13	631:24 632:19	696:16	open	551:1 581:12,13,25
507:24 508:25	634:4 637:15,17	obstruction	634:6	
509:12 510:21	638:12 641:10	513:5	operates	555:11 556:6
511:17 512:1,7	645:14 646:8,10	obtain	operating	697:2
513:8 514:3,4,16	648:2 649:4,17	624:24	operative	697:2
515:3 517:7	650:5 651:6 652:9	obtained	438:9 462:11,24	
518:17,24 519:12	653:2,10 654:8,19	483:7 486:25 487:4	463:12	
520:22,23 521:24	655:14 657:24	590:5 591:14	opinion	476:9 478:2 486:7
522:7,8 523:4,16	659:15 663:2,15	obvious	496:11 515:14	
524:8,19 526:9,13	664:4,13 665:22	611:3	526:4,12,20	
526:21 527:18	666:13 668:6	obviously	527:24 528:14	
528:3 529:4,23,24	669:5,25 670:1,14	592:22 624:10	529:1,7,14 531:3	
532:6 533:2	670:15 671:1,7,21	662:10 705:5	532:5 533:1,14	
534:19 536:3	671:23 672:9,16	OCAC	535:6,24 536:14	
537:17 542:4,23	673:1,25 674:11	479:21 483:14	536:21 539:24	
543:15 546:1,5	674:23 675:13,21	485:20 487:20,25	540:1,2 541:15	
547:11 548:9	675:23 676:6	488:2	542:2 546:15	
549:10 552:7	677:7,23 678:8,17	occasion	547:6,10 550:6,20	
553:18 556:18	678:18 679:6,14	593:13 708:17	552:2 553:1,8	
557:7,19 558:15	679:19 680:6,8,20	occasions	560:7,21 566:12	
558:20 560:20	681:20 682:6	673:3 676:19	567:1,5,8 568:17	
561:5,11,22,23	684:14 685:18	occupational	576:9 578:1	
562:14,24 563:7	686:5,12 687:1,7	587:11	587:23 588:16,19	
563:25 564:7,8,12	709:14 710:6,19	occur	594:22 607:14	
564:20 565:15,17	710:21 712:9,23	683:25	610:14,20,24	
567:4,16 568:16	713:13 715:23	occurrence	633:2,19 637:7	
568:23 569:7,23	716:22 717:12	581:5	640:2,10,15 641:6	
571:7 572:14	718:17,25 719:13	October	641:9 674:3,7,10	
573:1 576:16	721:12,14,23	573:16	679:3,7 686:19	
577:1 578:5 579:5	objection	odds		
579:16 580:12	460:25 601:11	648:22 654:2		
581:7,19 582:3	617:1 653:14	704:18		
584:20 587:4	654:9 676:8	OF7		
588:6,21 592:20	691:17 692:25	647:4		
592:21 593:7	693:4 694:7,20	offering		
597:7,21 598:16	695:3,7 699:21	567:8		
599:7 600:3	700:17 701:4	offhand		
603:12 604:3,13	702:14,23 704:9	452:8		
605:5,15 607:1,18	705:1,24 706:9	oftentimes		
608:4,14,22	715:2 723:7,23	696:22	oncologist	
			464:9 467:24	

687:6 694:10	451:19,23 452:2	526:19 527:16,25	632:25 633:20	453:21 455:5 458:9
699:3,18 700:6,16	453:11,16 456:8	528:7,11,15,19	634:2 637:14,22	459:18 460:5
701:2,5,22 706:4	456:11,21,23,24	529:2,16 530:21	638:10,16 640:4	471:14,17 548:25
706:17	456:24 457:21	531:6,11,15 532:4	640:24 643:15,20	552:18 553:4,5
opinions	458:5,7 459:12,15	532:25 533:12	643:25 645:9	579:25 634:7
437:2 492:4 535:3	459:19 460:1,3,11	534:15,17,18	646:6 648:11	635:4,7,14 636:22
552:6 560:18,19	460:12,16 461:6	535:8,9,11,16,19	649:14 650:23	ovary
565:8 568:11	461:15 462:4,7	535:20,21 536:2	651:5,11 652:20	437:13,19 440:5
575:13 576:3	468:3 469:17,20	536:17 537:5,11	652:25 653:9,19	454:2,13 472:1
588:14 591:2,5,21	471:9,10,19 472:1	538:24 539:12,19	654:16 655:2,12	548:19 596:1
592:19 595:13	472:15,20,22,23	540:11 543:5,11	658:18,20 659:6	636:4 701:23,24
599:3 610:9	473:8,15,17,19	543:13,17 544:2,6	659:11,14 660:12	702:1,3
634:11 653:1	474:4,5,9,10,13	546:18,24 547:4,7	660:15 666:12	overall
654:18 681:4,5	474:21,24 475:1	547:17 548:1,4,17	667:1,7,14,20,24	476:2 498:17 655:2
688:8 694:5	475:16,20,25	548:23 550:7,23	668:4,20,24 669:4	725:13
707:15,20,23,25	476:3,24 477:17	551:11 553:13	669:12,16,23	ovulation
708:5 720:22	478:18 479:11,13	556:16,20,21	670:11,12,20,22	558:8 675:4
721:7,21	480:14 482:8,14	557:5,14,17,25	671:5,11,15	oxidative
opportunity	482:18 483:6,8,23	558:1,10 559:24	673:19,19 674:8	560:2
573:18 607:5	484:14 485:7,10	559:25 560:8,16	674:12,16,21,25	P
opposed	485:19 486:5,8	561:10,20 566:14	675:6,11,17,18	P
552:11	487:13 488:7,11	566:17,24 567:2,6	676:5,21,24 677:5	430:1,1 431:1,1
Oral	488:21 489:2,4,21	568:15 570:2	677:10,22 678:15	432:5,5 436:2
429:18	490:4,14 491:17	571:4 572:3,12,25	679:4,5 680:5,18	P-S-O-O-Y
order	492:17,24 493:3	573:12 576:15,19	681:12,15,18,25	580:21
465:1 529:2 531:14	493:17 494:21	576:25 577:3,4,13	682:5,10,11	p.m
538:6 630:17	495:14 496:14	578:4,8,16 579:3	683:15,25 684:13	575:7 582:24,25
650:10 696:21	497:23 498:8,20	579:10,15,24	685:17 686:15,23	592:2,3 609:19,20
organs	501:22 502:8,13	582:14 583:5	687:8,10,18	621:24,25 645:22
455:17,25 696:21	503:3 504:4 505:1	584:17 588:3,5,10	690:21,22 693:10	645:23 682:20,21
original	505:5 506:9,13	588:20 594:24	694:14,19,23	727:25
495:6 729:15	507:2,20 509:7,11	597:13,18,24	695:11 698:4,19	pad
outside	510:8,14,20	600:2,8 602:18	698:25 699:20	585:17
599:1 600:6 603:17	512:14,19 513:2,6	603:11,13 604:8	701:18 703:4	pads
606:8 636:18	513:10,15,21	604:11,22 605:1	706:8,20,23 707:9	552:4,12
ovarian	514:2,12 515:16	606:1,5 608:3	710:16,23 712:22	page
433:12,15,17,22	516:2,23 517:2,5	610:15,19 611:1	713:1,1,11,16,18	432:21 435:2
434:11,19 437:23	517:8,10,16,18,20	611:10,20,24	714:3 715:22	439:18 445:23,24
438:5 439:12,20	518:2,6,11,13,16	612:6,16,22 613:3	716:3,5,19,25	446:8 448:20
439:22,24 440:3,4	518:21,21 519:2,3	613:6,23 614:7,12	717:3,11,20,25	462:13,20 463:7
440:6,11,12,15,25	519:4 520:16,19	614:17,21,24	718:4,13,15,23	471:1 477:20
441:3,8,11,24	521:11,21,23	615:14,19,24	719:2,12 723:4,20	484:2,22 485:13
442:3,5,11 444:19	522:1,5,12,16	616:9,23 617:13	723:22 724:24	496:2,3 498:14
444:22 445:16	523:1,14,17,23,24	618:1 623:3 624:2	725:1,19,23 726:2	507:16 524:10
446:4,17,21	524:5,13,16	624:3 626:17,24	726:17,25 727:1,3	538:13 539:4,5
448:25 449:1	525:10,16,19,24	627:14,23,24	727:8,16	544:20 554:9,16
450:7,12,13 451:7	525:25 526:2,6,8	628:2,6 632:8,13	ovaries	

554:17 574:8,13 580:17 585:20 595:16,17 596:3 596:17,25 598:10 614:11 615:3 619:1,2,2,4,5,16 622:3 635:9,11,12 635:18,23 641:8 642:3,4 645:13 647:4 656:4,14 657:3 665:3,8 691:21 692:4 703:10,19,20 711:18 720:13 722:19 725:5,6,8 725:11 726:6,12 730:2 732:3	691:12 703:4 704:7,16 papers 480:8 694:1 727:5 paraaortic 595:25 paragraph 538:21 539:3,5 596:5,6 662:4 703:10,24 722:24 725:12 726:13 parent 456:4 622:20 parents 620:20 621:5 622:6 622:14 part 443:21,22 502:1 519:5 538:22 539:7 549:3 552:24 554:21 573:3 582:17 639:16 641:16 649:25 participants 647:5 668:9,23 participated 683:21 particle 594:17 particles 515:2,7,12,24 562:21 563:17 596:16,19,21,23 597:1,9,20 598:3 598:6,7,13,14,18 598:20,24 599:5 599:24,25 600:17 600:21 635:18,20 635:21,22,25 636:2,9,11,13,16 636:21 637:1,4,10 637:13,19,20,25 638:1,9,14,22 639:11 640:14	553:24 564:5,19 568:12,13 649:1 677:22 687:25 712:5 714:23 particularly 648:15 parties 728:14 partly 681:21 parts 725:15 partway 496:15 party 728:11 passage 656:7 passed 464:3 573:15 624:12 passes 456:4 patent 554:11,23 682:9 paternal 578:25 579:7 614:2 614:25 616:2 617:21 618:13,15 620:7 626:23 627:17 656:11,15 656:23 657:6,14 657:16,25 658:4 658:12,16,19 659:11 660:5,10 660:19,20 pathologic 448:13 461:25 533:23 pathologically 438:11 pathologist 596:11,12 699:10 pathologists 700:2 pathology 438:9 462:11,23	463:11 509:18 595:12 596:13 601:8,10,22 602:5 634:10 639:5,7,17 699:9 pathways 502:22 patience 722:5 patient 458:4,11 459:9,9 459:14 460:7 465:11,14 466:6 466:12,13,18 503:9 510:2 517:12 524:11 529:10,10 537:18 542:25 553:24 556:13 557:4,22 629:12,14,19 658:17 659:10 660:2,4 686:20 patient's 509:17 511:15,21 552:23 618:6 624:2 658:12 patients 468:12 483:12,15 483:19 484:5,7 505:3 510:1 570:23 596:14 604:25 606:3 612:21 625:16 666:15 669:11 684:9 693:8 696:22 720:5 Pause 726:10 PC 430:2,12 peer-reviewed 723:1 pelvic 512:20,22 556:1,3 595:25 635:5,15 636:4,23 697:12 700:14,22,25	pending 519:24 Penninkilampi 433:18 489:16,20 490:2,5,23 491:15 491:23 Penninkilampi's 489:23 people 455:20 456:24 472:25 516:19 570:20 606:19 626:1 647:16 651:12 percentage 473:18 524:4 534:14,16,17,23 535:7,8,10 537:19 percentages 537:15 perform 511:23 perineal 433:17 490:4 667:20 668:5 722:25 723:4,20 726:18,24 727:11 perineum 553:5 585:9 period 549:7 571:3,22,23 572:1 584:3,5 587:18 631:22 668:13 periods 697:13 peritoneal 554:8 peritoneally 496:12 permission 520:9 personal 586:12 pertinent 445:4 phone
---	--	--	--	---

589:13,18,21,24	708:6,10	726:23	522:23 528:10	717:10,25 718:5
591:15 592:6	platy	possibilities	529:3 531:4,10,13	719:10
phosphorus	560:23	512:2	531:17,21,21,25	powder's
638:15	play	possibility	532:13 533:13	651:10
phrase	532:25	499:21 534:6	538:24 539:12	powder-related
659:9	played	541:23 542:19	546:17 547:1,17	540:23
physical	579:14 584:23	543:2 607:17	547:20 548:8,11	powders
455:12	600:1 613:22	612:6 660:14	548:13,18,24	567:21 665:14
physically	637:13 638:9	662:11 671:4,19	549:2,8,12,13,15	power
586:1	Plaza	672:2,5,15	550:6,21,23 551:3	720:4
physician	430:8	possible	551:5,11,17,21	powered
465:11 683:5,19	please	499:19 511:14	552:3,17 553:12	719:23
physician-patient	448:6 451:13 452:9	518:10,12 522:3	553:16 554:12,24	PPF
593:10	529:23 712:18	532:24 547:5	560:7,22 565:9	510:11,12 514:21
physicians	729:3,8	548:4 612:4,10,15	567:14 568:14,18	practice
573:9 574:5 586:22	plots	674:8	569:12,15,17	696:13
593:20,23 604:23	476:18,20	possibly	572:23 576:10,14	practiced
630:3 676:3,4	point	498:20 536:20	576:18 578:17	470:20 513:24
683:1,14	451:1 547:13,14,15	557:10 607:21,22	579:25 584:16,23	PRACTICES
physiology	696:8 716:1	posterior	584:25 585:9,15	429:5
529:11	pointed	662:7	585:22 586:7,22	practitioner
picked	456:13	postmenopausal	588:4,9,10 589:6	662:15,19
530:25	points	582:15 583:6,11,14	589:9 594:23	pre-
PID	693:7 694:8	583:18 658:2	599:12 604:9,10	583:17
544:2,5,6	polyps	660:22	604:14 610:15	precancer
piece	698:3	postoperative	611:5 631:17	446:12
613:14	pooled	554:13,25	632:7,13 633:11	precise
pieces	483:21	potassium	634:6 640:3,6,13	551:20 716:13
527:1	poorly	638:15	640:23 643:20,23	predisposition
pin	669:16	potential	643:25 644:10,18	442:1 447:5
618:4,10	population	462:9,22 463:20	645:3,9 646:5	predominantly
pits	470:1 472:17	514:14 542:20	648:10 649:14	644:1
455:8	474:12 483:16	545:3 553:11	650:20,22 651:4	premenopausal
place	545:1 643:16	587:2 588:3	651:22 652:19,24	440:16 583:9,13
555:5 615:21 616:2	populations	643:14 659:13	653:8,19,20 654:7	627:16,16 658:2
726:6 728:8	644:2,3	661:6 669:22	654:13,15 665:10	660:21
places	portion	670:10 672:23	666:6 674:9 682:2	preparation
615:22,25 722:16	444:2 445:4 559:1	727:11,13	682:4 686:4,11,14	506:25
plaintiff	595:2	powder	686:22,24 690:21	prepared
429:10 553:25	position	429:4 433:14,22	694:19,22 699:19	436:18 609:23
578:23	689:14 690:11	434:10 437:16	700:10,12 701:3,6	present
plaintiffs	717:6 718:10	439:1 477:22	701:16,22 702:7,9	704:12
430:5,10,15 586:6	positive	482:7 486:7 488:7	706:18 707:8	presented
692:16 702:21	498:19 518:5 524:6	489:4 491:18	710:17,24 712:21	707:12,17 722:2
705:22 707:9	542:8 544:11,14	492:18,24 496:12	712:25 713:10,15	pressure
708:10	583:12,16 693:9	497:23 507:19	713:22 715:21	512:20
plan	723:3 724:4	509:6 510:7	716:2,6,18,25	presumed

465:20,24 467:10 632:20	profile 578:23 606:1	461:9	632:20 Public 429:22 728:4,21 731:20	621:11 661:8 669:17 682:18 683:8 688:5 691:1 691:10 694:12
pretty 543:5 690:4	prognosis 606:25 607:15,22	449:3	447:21,23 448:4,9 publication 484:19 546:21 646:3	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
prevalence 644:18 645:2	progress 543:22	543:22	publications 690:2,5,12,17,20	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
prevalent 650:20	project 543:22	543:22	published 493:24 510:17 692:20	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
prevented 517:17	promise 533:10	533:10	PubMed 690:11	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
previous 498:11,12 572:11 668:11,13 698:6	pronounce 703:3	703:3	pull 481:18 516:9,10,13 582:12 691:18 703:15 705:11	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
previously 435:1 436:6 583:22	proof 469:1	469:1	pulled 690:6	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
print 689:10	properties 554:7 665:9	554:7 665:9	pulls 516:14	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
prior 438:10 573:3,6 634:3 728:4	prophylactic 460:23	460:23	purchased 587:16	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
privileged 590:1,11	proportionate 536:1	536:1	purpose 589:23	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
probability 522:4	propounded 731:6	731:6	pursuant 728:10	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
probably 470:3 473:20 487:10 494:10,22 496:18,23 499:15 594:1 641:22,23	protective 509:16 510:15 533:16 542:12 670:20	509:16 510:15 533:16 542:12 670:20	put 468:5 521:11 552:2 552:4,4,8 585:16 627:2 628:2 631:8	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
problem 445:24	proved 465:15	465:15	puts 628:11	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
PROCEEDINGS 432:6	proven 472:13 582:5	472:13 582:5	putting 467:8 552:11,12 631:15 658:17	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
process 510:3 555:16 557:15	provide 576:4 620:6 634:15	576:4 620:6 634:15	Pye 656:15,25 657:4	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
produced 444:6	provided 574:23 616:24 721:3	574:23 616:24 721:3	Q	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
product 569:1	product 510:18	510:18	qualification 503:16	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
products 429:4,5 727:13	Psooy 580:19	580:19	quantified 459:10 460:13	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
professional 429:20 545:13 728:2,19	PTCH 453:9	448:15 453:1,6 457:5,20,22 459:4	questioning 450:1	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5
professionals 502:5,6	PTCH1	459:10 460:13	questions 436:15 481:6,7,8 481:13 484:9	695:19 703:3 708:24 709:1 717:6 719:20,25 720:21 722:6 727:23 731:5

648:22 654:2	714:10,15 729:5	629:5 645:21	referenced	594:17 718:15
ratios	730:4,6,8,10,12	658:25 659:4	relationship	439:23 451:2 499:1
704:18	730:14,16,18,20	661:12,16 662:3		501:15 593:10
RDR	730:22,24	664:24		621:7 645:8 646:4
728:18	reasonable	Record(s)	referred	648:9 649:13
reach	708:1	433:3,6 434:4,15	642:12,19,24 724:2	659:21 712:21
710:16,22	reasons	444:8 445:9 615:6	725:24 727:2	725:22
reached	594:25 601:25	661:21	referring	relative
534:11	639:18 669:11,13	records	502:15,18 566:16	440:11,14,15,18
reaction	669:13	440:22 444:3,5	598:15 641:21	441:10 471:12
531:20 552:24	REATH	445:6 455:10	720:12 723:19	472:6 475:24
554:14 555:5,8,9	431:2	465:16 467:22	refers	476:23 477:16
555:19 558:14,17	recall	510:11 514:18	503:12	538:25 539:17
559:4,9	454:6 476:13 507:6	574:15,19,22	refined	543:18
reactions	566:6 585:16	586:17,20 588:8	reflected	541:24 579:8
552:23 555:1	621:17 662:24	593:5 600:14	refresh	613:10 627:14,18
read	663:3 693:15	602:20,24 603:6,9	603:6	627:21 646:23,25
485:23,25 495:18	719:25	603:22 614:1,20	refresh	647:11 660:1,6,12
524:23 558:23	receipt	615:4 616:7,15,21	443:24 620:6 657:5	728:13,14
559:2 646:12	729:16	617:11,15,16,17	regard	relatively
656:7 691:22	receive	617:24 618:11	437:2	607:6 608:19 623:1
703:9 723:14	606:23	621:15 628:17	regarding	relatives
729:3 731:4	received	630:2 631:12,13	436:19 498:7 542:3	659:24
readback	628:19	638:19 670:18	593:21 637:7	release
559:5	recess	681:6	645:8 646:4 648:9	560:5
reading	508:19 575:6	rectum	649:13 692:20	released
453:11 507:15	582:22,24 592:2	662:17	694:6,13 703:4	559:23
524:25 620:15	609:19 621:24	recur	708:5,9	relevant
649:16 663:20	645:22 682:20	607:24 608:5,7,8	regardless	446:20 591:5 634:1
703:17,18 722:23	recognizable	608:13,18	474:19 600:10	reliable
ready	676:21	recurred	regards	464:14 702:13
575:9	recognized	603:14	722:24	relied
real	681:16 698:7	recurrence	Registered	593:3 633:3
726:7	recollection	603:1,19 607:14	429:21 728:3,19	relies
realize	443:25 591:19	recurs	reject	591:1
642:6	592:16 600:18	607:24	467:3	relooking
really	603:3 614:1,23	Red	related	437:24
475:9 516:23 517:4	620:6 657:5 720:2	429:18	448:24 450:6,11,13	rely
545:8 604:18	recommend	reduce	457:21 578:13	465:13 468:12
716:13	460:18,22 461:3	633:18,20	579:10 627:1	486:6 595:11
Realtime	669:10 670:3	refer	670:12 710:17,23	628:23 634:9
429:21 728:3,20	record	503:13	725:17	641:6
reason	445:3 466:7 480:17	reference	relates	relying
451:8 483:17	482:4 508:18	473:16 554:15	495:14 546:18	488:4 590:6 592:18
499:15 519:6	559:2 575:5 583:3	595:12 625:2	567:9 591:20	721:6,20
564:23 566:10	592:1 603:18	626:8,23 642:7	648:25	remain
629:7 655:8	615:10,24 628:5	657:2	relating	581:21

remember	628:22,25 631:8	requirement	473:21 476:8	508:10 511:8,25
443:6 452:21	631:15 634:9,10	residents	482:21 501:4	512:21 513:6,22
467:23 550:16	634:16,21,24	respect	509:18,21 510:10	514:2,15 516:1,6
566:6,25 582:18	636:8 638:20	reviewed	510:13 514:22	517:6 519:11
589:21 614:4	639:25 640:9	reviewer	533:15 588:7	522:18 524:1,17
625:5 661:14,15	641:8,16 642:7,12	response	620:12 638:25	525:14,17 526:1
666:10 667:2	651:2 695:16,23	responses	645:19 682:7	526:20 532:19
670:25 681:10	695:23,24 699:13	reporter	692:9 699:23	533:9 538:16
684:18 693:17,19	708:6,11 711:14	reporting	708:10 711:22	539:10 545:2,5
693:21 694:12	713:8 719:19	responsible	712:19	547:5 549:9
695:18 696:5	720:9,13	rest	717:20	550:17,24 552:19
697:22 703:7		rest	478:16 506:23	553:17 555:19
711:5		rest	510:17,24 561:9	556:2,17 557:12
removal	480:3,4 482:18	rest	574:11 594:16	558:14 563:12
696:20	584:7 585:11	rest	603:23 617:17	567:15 571:5
removed	615:1 617:19	rest	639:11 664:8	572:22 573:13
515:20 587:19	618:12 632:1	rest	640:2 670:17	574:11,13,16,23
607:8	646:22 662:14	rest	685:5 699:9 702:4	575:14,21 576:1
reoccurrence	668:23 699:8	rest	702:8 720:25	576:11 578:12
602:17 607:17		rest	721:19	
repeat	429:21,21,21 497:7	rest	reviewing	586:17,23 589:7
451:13 674:19	728:3,3,3,19,20	rest	475:22 510:9,25	589:12 591:18
replacement	728:20	rest	523:5 542:6	594:5 595:14,21
521:8,16 522:25	Reporters	rest	584:21 618:11	595:24,24 596:2
523:11 532:15	429:20 728:2,19	rest	681:6 708:14	596:11,15,21
680:1		rest	rheumatoid	597:5,11,12
report	reporting	rest	555:24	598:10 602:9,12
434:2,8 436:19	482:15 483:5,7	rest	right	602:14 603:5,11
437:1,6,7,15	reports	rest	436:20,24 437:3,11	608:13,25 609:4
438:9 439:17	596:20,22 610:2	rest	437:19,23 438:23	609:13,24 610:6
448:17,20 462:11	697:20 702:17	rest	439:12,22 440:21	613:7 614:14
462:14,21,24	705:7 707:23	rest	441:4,21 442:15	615:11,16 618:3
463:5,12 476:19	708:14 711:19	rest	443:7,9 448:2,10	618:12 622:7,17
477:20 492:13	721:1,11	rest	471:2,5 474:15,16	622:22 623:16
514:25 515:5,6	representative	rest	484:1,4 485:16,17	624:16 626:5,6
523:21 524:10,23	702:22	rest	490:11,22 491:4	630:19 633:6,13
554:6,9,16 562:22	reproductive	rest	491:11 498:18	634:3,11,25 635:4
563:17 567:20	581:18 582:2	rest	530:15 628:24	635:5,5,6,7,13,15
574:8 575:19,24	665:17 682:10	rest	644:17,23,24,25	635:22 636:4,5
575:25 576:6	request	rest	645:15 646:11,12	641:4,8 642:16
580:17 594:16	573:25 628:13	rest	648:14 667:18	643:10,16 644:6
595:4,8,11,12	582:22 631:12	rest	668:8,17	644:22 645:11
596:4 598:3	706:11 728:11	résumé	477:15 481:22	648:6,22 652:8
600:15 602:20	require	return	482:1 484:17,21	653:1 656:13,21
603:7 609:23	529:17 531:13	review	486:1 487:5	658:11 660:5
610:3,4,11 614:10	required	review	492:13 494:1	661:2 662:5,14,20
624:18 625:24	532:3 640:7,8	review	498:22 501:19	663:10 666:2
		review	503:23 504:12	667:15 668:5,25
		review	505:19 507:21	

671:3 677:16	514:19 518:20	679:15,20,21,21	436:2	498:23 501:17
678:16 679:18	519:2,3,5 520:16	679:23 680:2,16	Saavalainen	525:3 549:12
682:16 683:22	520:18,18 521:10	680:17,22,24	470:19 703:4,13	585:19 598:2
684:2 685:9 688:4	521:21 522:16,17	681:7,8,16,17	709:8	615:21,25 658:3
688:17,22 689:8	523:13 524:5,12	684:19,23,25	Saed's	704:12 712:11
689:12,15 690:25	524:16 525:9,16	685:3,6,12,14,22	706:6	713:14 714:6
703:21 704:18,25	525:19,20,21,23	688:1 690:22	SALES	715:1,6,7,9,10,11
711:13,17 712:8	527:15 528:7,17	698:3,7,16,19,25	429:5	716:1,4
714:6,9,12 715:19	529:12,18 530:15	703:5 704:13	saliva	scarring
716:12 720:6,16	530:16 531:6,14	711:14 712:25	624:20,23 625:6,16	696:25
720:18 723:13,13	531:23 533:15,18	716:16 717:8,22	625:18,22 626:1,4	Schildkraut
727:19	535:25 536:17	725:19	626:10 631:9	478:7,25 488:15
right-hand	537:4,9,15,20	risks	salpingo-oophor...	640:17,18 641:3
485:14	538:24,25 539:13	542:12 671:12	460:24	641:20 642:24
Rigler's	539:17,18 540:5,8	risky	sample	643:6,9,13 646:2
567:20	540:10 541:24	697:1	712:2	648:8
rings	542:20 543:1,3,4	River	samples	school
711:7	543:10,13,17,21	429:19	568:7 589:5,9	452:22
rise	543:23 544:2,6	robustness	599:19	SCHRAMM
523:12	545:4 576:19	725:18	SARA	430:12
risk	577:12,15,17,21	role	430:12	science
433:14 434:10,18	577:23,24 578:3,9	537:4 579:14	satiety	451:6,17 502:6
438:17,22 439:4,8	578:10 579:3,10	584:23 600:1	512:23	504:13 516:22
439:25 440:5,12	580:4 607:13	613:22 637:13	saw	524:4 547:8 553:1
440:25 441:3,8,15	608:2,18,18 611:3	638:8	563:18 571:2	559:17,18
441:20,21 446:21	612:1 613:8,10,16	Rosenblatt	587:14 603:18	scientific
447:24 449:1	618:5 624:1 627:9	492:22	626:8 630:2	708:2 721:9
451:2,7,19,24	627:23 628:3,11	round	640:14 699:8,12	scientist
454:13,22,25	632:25 633:20	474:5	700:3	545:12
459:12,14,19	637:22 640:23	route	saying	SDHA
460:12,15 461:5	643:20 644:1	548:13 579:19	449:21 463:22,23	448:13,25
461:13,14 462:4,6	646:23,25 647:11	580:8,10,13	466:12,13 472:11	search
462:9,17,22	647:22 648:16,17	631:16 726:18	475:9 495:2	512:5 690:11
463:20 469:16,19	648:22 649:8	routine	505:22 520:4	second
469:24,25 470:13	650:23 652:21,25	585:21	560:15 576:15,17	445:2,24 454:24
470:21 471:7,9,12	653:19 654:1,16	routinely	576:23 577:2	474:2 596:5,6
471:18,24 472:1,6	655:2 657:22	596:13	601:2 629:20	641:15 645:21
473:1,17 474:20	658:18 659:13,14	rule	644:15 652:15	662:4 692:15
474:24,25 475:3,7	660:15 661:6	469:12 540:24	673:8 712:24	703:10,19
475:19,24 476:3	666:12,20 667:1,6	541:13,22 542:19	716:7	secrete
476:23 477:16	667:14,23 668:3	728:11	says	560:1
478:10,14,18	668:20 669:3,12	ruled	444:18 452:24	section
479:12 482:7	669:16,22 670:11	566:21	453:17,22 454:1	645:13 698:6,13,16
485:18 490:24	670:18,19,21	—————	454:12,24 455:3,6	698:18
496:13 509:15	671:25 674:15	S	456:20 462:16	see
510:14 511:20	676:22,23 677:11	S	463:5,23 477:21	443:21 445:20,20
512:11,16 514:14	678:3,12 679:9,11	430:1 431:1 432:5	491:4 497:5	448:16,18 449:25

450:22,25 451:24	sent	set	shows	signs
452:20 465:3	696:23	576:5 610:10	478:17 479:11	455:6 512:18 513:3
468:14 473:19,22	sentence	614:10 641:3	488:5 489:3,20	697:10
474:12 477:2,24	454:25 455:3,6	728:9	664:15	silent
480:8 481:2,5,10	485:24 491:3	severe	siblings	556:12
483:12,13 484:3	498:23 539:10	554:13,25	619:8	silent-type
489:23 491:10	596:5 665:8	shake	sic	556:11
496:10 499:16	712:11 725:12	632:22	662:24	silicate
506:25 512:11,12	727:10	Shank	side	598:6,18 599:9
540:17 546:11	separate	444:4 464:9 465:24	481:5,5,10,11	silicon
562:22 563:13	478:22 492:11	467:14,21,23	485:14 538:21	598:9,20 599:13
586:19,24 587:20	506:18 556:20	shaped	579:9 620:15,15	637:4
595:16,18 596:18	577:16 715:20	662:9	620:22,23 656:19	similar
598:11 600:7	727:7	sheet	658:23 659:19,20	510:2 528:13 568:1
601:4,18,20,21,24	separated	729:6,9,12,15	660:18 662:5	632:10 650:23
602:2 606:4	478:5 491:25 508:4	731:7	sign	653:21
615:15 619:4	583:8,20 598:21	short	639:21 697:17	similarly
621:14 628:21,24	646:17 647:6	587:18 646:1	729:8	474:23 535:20
630:18 639:1,10	715:14	shorter	signature	559:11 630:14
639:14,16,20	separately	575:4	728:11	simple
647:13 653:22	478:23 492:19	shouting	significance	513:11
659:7 662:2,13,18	558:11 705:19	530:2	448:14 449:2	Simultaneous
664:14 665:11,18	713:5,23 714:11	show	450:19 453:9	550:13 676:16
665:19 667:25	714:16 719:15	443:20 463:3,4	457:5 479:4,8	single
668:1 681:6,7	separates	478:13,23 486:21	489:14 491:8	506:6
687:9,16,19 689:3	490:14	487:15 489:9,13	494:11,23 496:19	Sister
689:4 698:14	separating	494:15 495:10	496:24	666:21
699:24 700:1,4	716:8	497:19 506:15	significant	sit
716:15	September	515:23 542:8	438:3 441:18,22	570:24
seeing	429:16 432:3 436:3	544:13 578:22	442:16 443:10	site
446:7 541:24	728:23	601:8 639:5,6	446:14 478:14,17	559:14
600:21 639:22	series	645:16 655:21	478:24 479:12	sits
692:2,11 697:22	511:7 517:9,20	661:12 712:18	487:16 488:6,12	648:23
seen	587:5 696:5	showed	488:17 489:3	situation
451:5,17 515:5	serous	453:5,12 454:9	495:11 506:16	484:25
570:1 594:1	490:24 498:20	465:15 544:11	544:15 546:12	sizes
602:23 603:3,10	502:16,16 503:1	582:13 583:4	582:14 583:5,19	712:2
603:23 624:17	503:10,10 504:1,8	668:19 697:23	640:12 647:14	skin
626:5 639:25	504:10,18,20	698:11 706:7	648:1,4,20 649:9	453:18 454:14
709:18 710:3	505:11,13 569:21	shower	649:21 652:6	455:8 456:19
719:8	570:3,3 606:3,11	549:13,13 585:24	668:3 684:16	586:15
sees	646:18 647:7,10	showered	723:3 724:3	slide
515:23	648:18 693:12	586:2	726:23	601:10,22 639:17
self-care	SERVICES	showing	significantly	slides
727:13	429:24	716:8	457:1	639:7
sense	serving	shown	signing	slightly
451:12 536:5	594:7,12	454:5 560:22 722:3	729:10	539:25 569:9

577:15 606:9	source	447:4 604:2,4,8,16	stated	stenographically
small	464:14 483:9	604:18 605:14,18	437:15 508:3 515:6	728:8
455:8 493:2,5,21	South	605:19 678:16,20	601:25 701:20	step
494:9,21 495:1,9	430:18	sports	statement	542:5 547:21
496:17,23 515:20	soy	586:2	452:10 499:11	stop
583:20 595:2	698:24	sschramm@bbg...	503:12 525:7	438:19 461:18
605:13	space	430:13	539:24 540:14	474:2 519:25
smoker	729:6	ST	541:4 605:7 648:7	621:11 662:20
447:11	speak	429:8	649:20 650:1	Street
smokers	473:6 574:1	stable	651:8 675:25	429:19 430:3,18
545:21	speaking	543:5	696:11,13 704:8	431:4
smoking	473:7,10,15 530:8	stack	710:3 717:9,21	strengths
447:10,24 505:17	724:8	470:9 538:9	718:3,14 719:8	695:15 696:1,4
505:22 506:5	specific	stage	723:22	stress
534:3 544:25	503:21 508:23	603:16 606:13,14	states	560:2
545:17,20,23	509:3,5 510:19	606:22 607:6	429:1 473:11	strike
546:3	514:12 540:22	608:19	485:18 487:19	440:9 449:4,20
socially	541:10 542:2	stand	599:8 615:14	455:22 457:7
594:1	553:7 560:18	707:22	622:15 712:20	527:12 543:11
sodium	582:19 588:17	standard	716:17	548:19 567:10
638:15	617:11 675:11,19	465:2 469:13	stating	580:6 587:22
somebody	677:5 685:14	703:10,25 704:2	629:4	594:15 611:8
459:2 469:7 473:3	715:15	standpoint	statistical	625:12 659:24
551:1,5 615:1,24	specifically	488:5	478:13,24 479:3,8	stromal
617:25	444:3 454:1,12	starch-based	487:16 489:14	497:5 701:24
somewhat	471:4 475:25	554:12,24	491:7 494:10,23	strong
543:18 648:13	520:17 542:11,16	start	496:19,24 506:16	554:14 555:1,4
sophisticated	544:4 552:13,22	520:13 691:10,22	649:21	558:13
626:3	555:14 565:4	705:14 722:16	statistically	studies
sorry	566:20 572:18	724:20	478:17 479:12	477:23 478:1,4,12
477:3 482:24 539:4	578:8 596:4	started	488:6,12 489:3	478:22 479:6,16
558:23,24 641:14	643:22 647:8	551:2	495:11 544:14	483:22 488:13,23
642:6 657:8 661:1	649:6 655:7 669:7	starting	546:12 583:18	488:25 489:8
680:12 700:23	684:8 693:12	483:19 496:16	647:1,14,25 648:3	490:15 491:10,13
701:11 703:11	713:8	619:17	648:19 649:9	491:24 492:23
705:14 723:9,9	specifics	starts	652:6 668:3	493:8,16,24
726:9	585:13 633:10	498:17 570:15,17	693:14 723:2	495:10 499:25
sort	specimen	570:19	724:3 726:23	506:17 541:25
511:3 613:9,13	602:6	state	stay	544:10 553:6
Sotto	spelled	429:8 490:23 499:7	664:1	632:6 643:25
620:12	452:21	499:8 501:14	stenographer	644:13,15 666:22
sound	spoken	508:2 523:21	487:2 550:14	669:7 706:6
477:15	573:20 574:4	524:11 538:20	582:23 664:23	711:22,25 713:16
sounded	593:14,16,19,23	539:16 643:23	676:17 706:12	714:17 715:13
724:10	682:24,25 683:11	644:5,8,18 649:12	711:7	717:2,17 718:6,19
sounds	683:13	665:12 693:2	stenographic	723:1,6 724:2,23
536:9 607:14	sporadic	728:22 729:5	480:16	725:14 726:22

study	731:15	sufficiently	536:6 541:12	609:6,8,13,16,23
470:21 473:20,22	subsequent	719:22	544:20 554:18	610:3,10 611:9,14
474:4,20 478:8,11	667:20,23	sugars	582:4 614:8	612:20 613:2
478:15,25 479:5	subsidiary	664:11	617:20 621:23	614:6,21 616:22
479:11,13,19	554:19	suggest	623:6 626:25	618:12 620:7
480:5,18,19,24	substance	455:12 672:19	641:20 642:2	621:7 623:7,11,17
481:14 482:11,19	731:6	suggested	645:18 653:14	623:19 624:15
483:12,16,16,21	substances	629:19	657:1 661:17	626:15 627:10
484:7 486:2	559:22,22 560:1	suggesting	673:4 700:18	628:6,8 631:21
487:25 488:2,3,4	561:13	591:3 627:6	surgeon	633:3,10,15
488:10,10,15	substantial	suggestion	593:24 699:7,25	634:21 637:8
489:12,18,24	437:17 439:1	629:14	surgeries	640:12 646:19
490:20 491:22,23	442:12 510:7	suggests	440:3 696:25	647:20 648:15,23
495:13 498:11,13	517:25 706:18	447:4 672:12	surgery	648:25 649:6
499:6 500:10,23	substantiate	Suite	438:13 461:3	650:16 661:9
501:4,10,12	492:4	430:9,14 431:4	464:19,20,25	662:14 683:9,19
506:15 543:9	subsumed	summary	465:3,9 469:12	684:11
582:6 641:21	718:14	supplement	607:7 630:11	Swann's
645:6 647:22	subtle	482:4 698:24	699:6,10 704:3	610:15 611:23
649:16 651:18	556:22	supplemental	709:21 710:11	613:5,21,24 615:3
652:1,2 655:10	subtype	692:6	surgical	616:8 617:13
666:22 668:2,7,18	477:21 489:2 493:9	supplemented	460:20 462:1	620:2,15,17,22,22
668:18 669:9,14	subtypes	721:10	465:19 466:6,11	621:1,15 622:11
669:17,24 670:4	478:5,9 491:1	support	466:15,24 467:3	622:14,15,25
692:21 693:8	494:9,20 496:17	432:21 478:1 486:6	467:18 469:1	623:14 627:22
694:6 703:12	496:22 498:8	486:19,21 515:8	558:12,13 596:10	630:14,16 631:17
704:13 705:3,10	499:17 501:16,22	541:7 570:22	596:12,13 628:21	632:12 633:19
705:13,15 706:5	502:8,13,15,23	584:16 627:25	629:23,23 630:24	634:14 635:3
706:10 709:8,13	503:8,14 504:15	632:5 642:20	631:3 666:3,7	636:17 637:13
709:25 710:1,14	504:21,25 505:5	650:7 659:18	696:20 704:14,21	638:10 640:1,10
710:15 715:16	506:18 566:25	672:20	705:8 709:11,15	656:10,11 657:6
720:5,11	570:2 694:13	supported	710:4	657:14 670:8
studying	710:25 711:16,20	515:18 550:8	surgically	671:8 674:8
544:22 545:2	712:6,16 714:1,1	584:10 585:5	470:23 629:23	682:23 683:10,14
643:13	714:5,7,19,24,25	632:24	630:9 704:17	SWANNV_ELB...
subanalyses	715:14,17 716:9	supportive	survivors	434:16 661:22
715:15	716:11 717:2,18	640:6 659:12	572:6	SWANNV_ELB...
subgroup	718:7,19 719:11	supports	susceptible	434:17 661:23
711:20,24 712:4,12	723:21 724:4,25	527:9 553:2	545:16 655:12	SWANNV_MB...
714:22 715:12	725:25 726:3	supposed	suspect	434:5 615:7
subgroups	727:3,7,16	653:15	629:7	sworn
713:5	sufficient	sure	suspected	436:6 728:5 731:15
subject	528:14 529:15	437:25 439:9	543:18	symptom
691:2 729:10	531:4,10 550:5,24	451:15 469:20	581:20	513:1 698:22
submitted	551:16,22 552:15	489:25 495:24	Swann	symptoms
554:11,23	584:19 640:13	502:3 521:1 533:7	429:9 434:9 609:1	455:6 465:7 469:7
Subscribed	682:1,9 701:2			469:8 511:16

512:18 513:3,9,14	484:20 485:9	682:2,12 684:16	712:21,25 713:10	631:1
513:15 555:6,8	487:13 489:22	685:13 691:16	713:15,21 715:21	tend
556:21,22 558:2,4	490:4 493:8	693:10 706:8	716:2,6,18,25	570:16
697:10 699:5	497:23 498:19	723:4,20 725:20	717:10,24 718:5	tenets
syndrome	499:1 501:15	726:19,24 727:12	719:10	510:22
433:10 452:7,12,15	506:8 507:1	talc-based	talk	terms
452:23,25 453:10	509:10 514:11,14	569:16	521:4 560:10 565:3	446:21 471:3
454:7,11,22	515:12,15,18,18	talcum	565:7,12,19	475:19 485:6
455:13,14,20	515:24 516:12	429:4 437:16 439:1	599:15	544:19 552:6
456:12,16,18	517:2,17 518:9,10	477:22 486:7	talked	563:20 564:4
457:2,13,17	518:10,13 522:22	488:7 489:4	438:20 462:3	585:21 587:1
system	523:2,7 528:6,7	491:17 492:17,24	495:13 516:24	591:1 592:19
581:13,14 582:1	528:14,19 529:7	496:12 507:19	520:14 527:5	606:2 634:1
systemic	529:15 532:21	509:6 510:7	541:8 542:13	657:21 658:9
555:9,18 559:16	533:1 534:14	522:23 528:10	543:3,25 544:9	659:9 660:24
560:3	535:7,18 536:19	529:3 531:4,10,13	548:20 550:11	721:20
T	536:21 537:10	531:17,21,21,25	551:8 553:10	Terry
Table	549:6 552:23	532:13 533:13	562:1 569:24	433:15 478:11,15
483:3 490:13 583:7	553:2,4 554:7	546:17,25 547:19	577:18 582:11	479:5,13,18
647:3 692:3,4	555:2 556:6,6	548:8,11,13,18,24	584:13 589:1,12	480:18,19,22,24
tables	558:7,12 560:23	549:2,8,12 550:6	594:25 604:7	481:4,14,24 482:5
482:23 646:12,13	560:23 561:2,3,4	550:21,22 551:3,5	606:9 629:11	482:8,10,15 483:5
692:6	561:12,16,19,19	551:11,16,21	632:11 639:9	483:16,25 484:1
Taher	561:25 562:3	552:3,17 553:12	643:5 670:9	484:12,15 486:2,3
492:21 493:23	565:13,14,19,20	553:16 560:7,22	679:24 682:13	486:24 488:3,10
take	567:6,24 568:7,22	565:9 567:13	684:9 700:8 720:9	488:25 489:12,17
470:8 490:8 495:22	569:6 576:24	568:17 572:23	720:9	491:15,21 495:13
508:9 509:25	577:3,5 584:2,3	576:9,14,18	talking	Terry's
524:3 571:11	586:16 588:16,18	578:16 579:25	460:15 475:3,4	480:3 487:16
575:2 609:3,7,12	588:23,24 596:20	584:16,23,25	484:24 494:3	test
609:15,17 621:20	596:22,25 597:16	585:9,15 586:6,22	499:9 519:1	624:19,20 625:6,7
622:2 667:10	599:21,23 600:16	588:4,9,10 589:6	620:11 642:7	625:10,14,15,18
682:17 696:18	600:21 605:13	594:23 604:9,10	645:3 656:17	625:19,22,23
697:6 714:16	610:18,24 611:2	604:14 610:14	Technical	626:6,10,13
taken	611:10,14,19,25	611:4 631:17	582:22	628:14,23,24
612:2,5,15,23	612:2,5,15,23	632:13 633:11	Teeth	629:6 630:16,18
631:21,23 633:19	634:6 640:3,6,13	634:6 640:3,6,13	597:23	630:19 631:9
633:25 636:1,2,9	651:4,10 652:18	651:4,10 652:18	tell	tested
636:11,19 637:5	652:24 653:8	652:24 653:8	459:14,23 460:16	441:7 518:4 568:2
637:20 638:21	654:7,13,15 674:9	654:7,13,15 674:9	481:15 482:13,17	672:7
643:14 651:9	682:1,3,8 686:4	682:1,3,8 686:4	491:22 570:23	testified
652:4,18 653:25	686:10,14,21,24	686:10,14,21,24	685:21 686:2,9	436:7 476:22 477:5
665:9 666:25	690:21 694:19,22	690:21 694:19,22	691:21	494:7 507:1 516:1
667:6,13,20,21	699:18 700:10,11	699:18 700:10,11	telling	516:5 612:21
668:5,10 669:3,19	701:3,6,15,22	701:3,6,15,22	553:21 615:22	656:11 708:16
669:22 670:22	702:7,9 706:17	702:7,9 706:17	687:17 704:4	testify
674:16 675:4	707:8 710:17,23	707:8 710:17,23	580:7 728:5	

testifying	670:5 674:13	613:9 617:10	507:3,24 508:6,25	637:17 638:12
610:9 690:15	684:22 699:22	629:5 641:22	509:12 510:21	641:10,14,19,25
691:23 720:23	720:19	642:13 650:14	511:17 512:1,7	642:3,5,18,23
testimony	things	656:17,19 663:4	513:8 514:3,16	643:3 645:14
439:7 446:19 469:5	440:23 469:11	666:7 670:5	515:3 517:7	646:10 648:2
476:10 477:12,13	510:13 513:13	671:12 680:9	518:17,24 519:12	649:4,17 650:5
494:16 495:17,25	522:1,5,11 523:18	690:4,15 697:19	519:16 520:1,8,22	651:6 652:9 653:2
496:3 505:6 507:5	529:17 541:3	700:8 708:16	521:24 522:7	653:10,16 654:8
507:7,25 526:11	545:12 556:19,23	721:18 722:1	523:4,16 524:8,19	654:19,21 655:14
543:10,12,16	558:9,11 560:3	725:11	525:2 526:9,13,21	656:6 657:24
571:3 580:9 586:5	565:20,22 597:22	third	527:18 528:3	659:15 663:2,15
588:22 594:21	601:7,20 605:21	454:24 575:12	529:4 530:7 532:6	664:4,13 665:22
607:19 633:3,12	605:21 606:6	third-degree	533:2 534:19	666:13 668:6
656:12 657:9	629:6 630:21	579:7	536:3 537:17	669:5,25 670:14
676:2,10,13,15,19	638:16 641:13	thirty	542:4,23 543:15	671:1,7,23 673:1
676:20 683:24	643:12 649:5	729:16	546:1,5 547:11	673:25 674:11,23
684:3 702:5,9,12	675:3,5 680:5	Thompson	548:9 549:10	675:13,23 676:8
707:7 710:9 721:2	think	430:2 432:10,12	552:7 553:18	676:12,18 677:7
724:7 728:8	440:25 441:14	441:12 442:8	556:18 557:19	677:23 678:8,17
testing	445:3 448:19	443:12,17 447:6	560:20 561:5,11	679:6,14,19 680:8
438:1 441:1 448:12	449:21 471:2	448:3,5,8 449:8	561:22 562:14,24	680:20 681:20
453:5 460:19	475:11 476:17	449:11,13,17,25	563:25 564:7,12	682:6 684:14
624:16,22 626:2	478:14 488:24	450:5,10,17,24	564:20 565:17	685:18 686:5,12
631:2,5	489:7 494:12	451:10,21 453:7	567:4,16 568:16	687:1,7 688:6,9
tests	495:1,7,22 500:15	453:25 454:8	568:23 569:7,23	688:10,15 691:3,8
625:16 626:1	503:20 510:11,23	456:14 457:10,15	571:7 572:14	692:1,10 693:1,16
Texas	515:9 518:3,25	457:25 458:12,15	573:1 576:16	694:11,24 695:4,9
429:19 728:22	520:7 526:6 527:6	458:22 459:16	577:1 578:5 579:5	700:7,20 701:10
thank	533:21 534:1,11	460:8,25 462:15	579:16 580:12	702:19 703:1,13
457:19 470:11	534:22 535:13	463:2 464:17	581:7,19 582:3	703:18,23 704:1
481:21 497:10,11	537:1,10,14	465:17 466:1,8	584:20 587:4	704:11 705:4
538:4 583:21	540:12 541:6	467:7,16,20 469:3	588:6,21 589:25	706:3,16 708:23
634:17 643:2	542:24 549:22	469:18 470:6,10	590:9,12,20 591:6	709:14 710:6,8,21
688:13,14 691:4	551:8,16 555:4,14	471:20 475:2,6,8	591:22 592:20	712:9,23 713:13
722:4 727:23,24	557:25 558:1,6,11	478:20 479:14	593:7 597:7,21	715:2,8,23 716:22
theory	564:23 565:2	480:6 481:18	598:16 599:7	717:12 718:17,25
654:17	566:11 567:23	483:10 484:23	600:3 601:11	719:13,19 721:14
therapy	568:20,24 569:8	485:11 486:9,12	603:12 604:3,13	722:7,14,22 723:9
521:8,16 522:25	571:2,12 574:9	486:17 487:14	605:5,15 607:1,18	723:12,16,25
523:11 532:15	577:18 580:3	488:9 489:6	608:4,14,22 609:5	724:10 725:4
606:18 607:9	584:23 586:10	491:19 493:1,10	609:11,17 610:21	726:4,8,11 727:9
680:1	589:25 590:7,10	493:18 494:24	614:15 615:20	727:18,21
thing	590:12,15,17,22	495:16 499:13,22	616:10 617:1,6,14	thought
447:7 468:1 516:15	591:2,12,22 601:1	500:9,14,22	621:23 623:5	448:17 518:25
523:6 582:6	601:13 604:21	501:13,24 502:10	626:21 629:2,16	539:2 557:24
590:21 600:7	607:20 608:12,15	503:5,19 504:5,16	630:5,20 631:24	592:9 642:8
622:22 623:24	609:12 612:22	505:21 506:2,10	632:19 634:4	thousand

472:24	599:19 600:22	training	true	701:23,24
thousands	634:13 635:2,18	690:1 696:15	443:11 457:14	twice
584:8 585:4	638:1 640:15	transcript	472:12,17,18	469:25 470:1 476:4
three	682:3	728:7 729:17,18	499:4,20 500:20	586:2,3 594:2
490:15 491:10,13	tissues	transcription	501:9 519:9 528:4	632:2 633:8
491:24 549:19,24	455:18 456:1 636:3	731:5	534:8 539:20	two
597:4 719:11	638:2,5	transformation	542:10 653:4	440:23,24 441:3,8
throat	title	706:7	654:25 702:20	529:8 556:19
443:2 445:15	667:3	translate	truth	558:11 570:21
446:25 447:9,17	titled	538:25	553:21 728:5,5,6	575:1 627:15
tied	667:13	translates	truthful	629:6 630:21
549:21 551:2	today	539:17	467:4	633:5 636:2,8,11
572:19 573:4	492:8 535:2 612:21	trapped	484:4 520:13 533:5	669:8 682:18
585:1 647:21	671:9 682:13	travel	533:6,7 536:12	686:22 690:5,17
time	684:9,9 692:17	553:3,5	550:1 554:5	690:17 700:2
438:13 452:22	702:21 705:23	traveled	560:13 601:23	704:5 707:18
467:24,25 490:8	720:24 721:7,19	636:21	663:18 716:13	717:6 719:18
495:23 508:7	722:1	traveling	trying	two-thirds
530:19,23 531:5	told	548:19,25 579:25	439:16 487:6 512:8	567:22
543:6 549:8,17	465:11 466:14	treat	516:18 524:22	type
570:13,15 571:24	468:20 516:8	504:24 505:3,4,10	560:14 599:4	447:5 454:18
572:7 582:7 584:3	537:1 587:16	505:14 663:19	617:9 637:9	470:14,22 474:19
584:6 585:23	630:2 639:18	697:4	tubal	476:7 485:19
587:19 589:14	656:19 662:19	treated	633:15	505:20,23 557:3
593:10 603:14,17	tolerate	661:10	tube	586:25 600:23
607:10 609:7	606:18	treating	595:24 596:1	614:3,3 615:1
624:7,12 631:22	top	465:10 573:9 574:5	tubes	616:3 617:22
668:14 673:21	635:11,12	586:22 593:20,23	549:21 551:2	625:9 626:25
675:1 678:21	topic	683:1,4,14,18	552:18 572:19	646:18 682:10,11
684:21 687:14	679:2	treatment	573:3 585:1 635:5	types
697:13 727:25	total	573:12 602:24	635:8,8,14,15	453:19,22,23 455:2
728:8	483:11,15,17 530:4	606:15,22,24	636:22 647:20	475:15 476:4
times	totally	608:20	TUCKER	490:14 495:1
441:4,8 472:2,16	518:22	treatments	430:17	496:14 552:15
472:16 473:2	tower	505:12	Tuesday	563:21 564:14
474:11 541:9	516:11	tremolite	429:16	566:21 583:9
549:20,25 550:1	trace	562:19,25 563:4,6	tumor	700:13,21,24,25
555:22 584:8,21	561:17 565:10,11	563:9,14,18 564:2	439:22 444:19	700:25 701:17
585:4 628:17	tracked	564:15,22,25	456:8,11 457:12	713:17
632:3,21 633:5	450:21,25 451:9,16	trial	499:2 501:7	typical
654:10,22 674:18	451:20,22,24	476:10,11 477:2,3	711:19 712:6	625:13
674:20,24 679:12	452:4	477:4,9 526:25	714:24	typo
timing	tract	576:4 580:8	tumors	494:12
706:1	551:1 580:11,14	610:10 720:23	453:21 454:2 455:4	U
tissue	581:18 582:2	trouble	456:23 457:16	U.S
515:8,20,21 595:2	634:5 636:22	702:6	498:21 505:10,10	
595:20 596:16	665:17 682:10			

440:2 472:13,21	689:11	496:12 498:19	702:10,17 705:17	vast
Uh-huh	Understood	499:1 501:15	706:1,2,18 707:8	697:20 698:1
554:10 622:4	477:10 673:22	505:11 513:25	710:18,24 712:22	verbatim
unaware	674:6 719:6	514:6,15 515:15	713:10,15,22	728:7
477:11,13	underwear	517:17 518:9	715:21 716:2,6,19	verification
uncertain	552:3,12 553:3	522:22,23 523:2,7	717:1,10,25 718:5	628:15
448:14 449:2 453:8	585:17 633:5	528:11,20,20	719:10 725:18	verified
uncertainties	undiagnosed	529:3,7,15 531:10	727:12	470:24 536:23
725:16	672:24 707:5	531:13,17,25	users	verifying
uncertainty	479:3	532:13 533:1,13	647:18 667:22	628:22
712:4 714:22	undifferentiated	536:19,22 538:24	691:16 692:17	versus
uncle	undiscovered	539:12 544:21	uses	480:3 504:8,9
443:2 445:14,18,19	548:6 671:6 672:24	546:17 547:1,17	487:22,23 518:12	547:19 604:17,17
445:19 446:1,2	673:9,24	547:20 548:8,11	531:4	651:25
578:24	Unfortunately	549:2,12,15,23	usually	viable
unclear	505:1	550:12,16,22,23	494:9,21 496:17,23	464:24
450:16,19 617:17	United	550:24,25 551:4	625:15 697:4	view
uncommon	429:1 473:11	551:16 552:16	458:9 460:4	440:7 495:9 500:3
597:13	univariant	553:13,17 560:22	<hr/>	528:6 550:4
undergo	546:8	561:12 567:6	V	551:22 555:21
624:15	unknown	568:18 572:23	v	556:7,10 557:13
undergone	534:7 541:23	573:3 578:17	429:11	561:21 563:4
608:21	542:20 543:1	584:9,12,16 585:8	vagina	578:14 588:4,7
underlying	546:16 547:25	585:22 586:7,17	580:25 581:6,9,17	591:17
529:11 532:20	548:5 588:3	586:22 588:4,10	581:22 666:19	Virgie
538:23 539:11	670:10 671:4,5,16	594:23 604:9,10	vague	619:18
underpowered	674:21 707:2	610:25 611:14	513:10	virtually
489:11 711:16	unusual	631:25 632:5,7	vaguely	632:17
712:1 714:8,21	455:7 608:10 655:9	633:23,25 634:3	452:21 661:14	visible
understand	up-to-date	640:3,13,23	VALERIE	570:18 600:20
451:11 495:24	689:25	643:20,23,25	429:9	601:1 602:5 607:8
500:19 501:2	updated	644:10,19 645:3,9	validate	visual
502:21 507:18	689:17 690:9,14	646:5,14 647:4,10	492:4	516:19
514:10 516:20	upsets	647:21,22 648:10	value	Vitae
527:19 533:4	666:18	648:18,21 649:7	491:15	434:21 688:25
535:5 550:19	usage	649:14,19,22	variant	voce
559:17 560:12	515:18 550:5	650:20,22 651:22	448:13,14 449:2	620:12
581:24 594:20	632:23 669:18	652:18 653:19,25	450:18 453:8	VOLUME
601:23 611:16	use	654:7,13 666:6,25	598:8 727:12	429:18
636:7 651:17	433:12,14,17	667:6,14,20 668:5	various	vulvar
658:6 675:15	434:10,18 477:22	668:10 669:19	598:3 635:21,24	661:10 662:6,16
676:10 686:18	478:3 480:14	670:22 674:9,16	701:6	VUS
717:5 718:9	482:7 484:20	682:4,8,12 684:16	448:15 450:15,21	451:5,17 453:5
understanding	485:9 486:7	686:4,11,14,22,24	529:10 650:24	458:21,23 459:2,3
483:4 501:21 502:7	487:13 488:8	693:10,14 694:19	Vaseline	459:4,10 460:12
502:11 534:25	489:4,22 490:4	698:24 700:12	662:16	
602:25 628:25	491:18 492:25	701:2,6,22 702:7		

461:9	we'll	Wentzensen	Wolf-37	519:1,14 520:15
VUSS	444:2 449:25	433:23 497:13,24	435:7	520:15 521:7,20
450:25 451:16	481:18 482:4	537:23 662:23	Wolf-40	522:15,22 525:11
W	490:1 497:20	664:19 665:5	433:3 444:8	525:14,22 526:5
wait	521:11 538:18,19	weren't	Wolf-41	527:11,13 531:4,5
520:2 539:1,1	549:19 591:25	475:9 530:7	433:6 445:9	552:2 553:11
688:6	621:22 634:18	West	Wolf-42	578:2 581:5
want	691:10 722:16	593:24	433:9 452:14	584:25 608:2
458:3 481:10 484:8	we're	white	Wolf-43	651:14 679:24,25
484:11,14 519:16	460:14 479:10	601:2,18 602:2	433:11 480:13	680:16,18,23
519:20,25 536:13	488:24 489:1,7	639:2 644:2,20	Wolf-44	681:15,18,24
545:13 546:7	495:24 541:24	645:5,10 646:7,17	433:14 482:7	685:16
575:2 608:25	544:20 651:17	647:6 648:12	Wolf-45	woman's
609:3 628:21,24	680:9 689:10	649:15 651:14	433:17 490:4	440:12 442:7
641:19,25 655:19	we've	652:4,7,12 653:21	Wolf-46	469:16 496:13
656:6 674:19	487:10 495:7,13	655:3	433:20 496:6	509:10,14 510:20
688:7,11 703:14	536:18,19 544:1,3	whites	Wolf-47	514:2 515:15
705:11	544:4 547:16,24	651:9	433:22 497:23	518:2 519:10
wanted	547:24 575:1,20	Whoa	Wolf-48	524:5 527:16,25
554:5	584:13 588:2	475:2	434:2 595:7	528:7,15,23
wants	589:1 604:21	withdraw	Wolf-49	529:16 531:9,19
467:22	618:23 632:11	440:8 485:2 562:7	434:4 615:6	548:4 577:23
War	639:9 655:21	575:17 577:11	Wolf-50	677:22 682:5
572:6	656:14 670:9	596:8 672:4	434:6 618:19	684:8
wasn't	671:9 677:13	witness	Wolf-51	women
449:19 543:21	679:12,24 682:13	470:7,11 480:23	434:8 634:20	440:2 450:22
616:1 649:9	684:9 688:19	481:21 508:11,17	Wolf-52	451:17,25 465:4,5
709:15	689:24 694:1	520:6 538:5 594:8	434:10 640:23	468:17 470:23
wasting	702:21 705:22	594:12 620:13	Wolf-53	471:10,13 472:12
512:21,25	721:1 723:6	653:12,17 676:14	434:13 655:24	472:24 473:7,12
water	725:10	691:4,24 706:13	Wolf-54	473:18 474:3,8
580:24 581:5,16	weak	711:5,9 722:20	434:15 661:21	513:1 550:12
582:6,7	538:24 539:13	727:24 728:11,11	Wolf-55	553:16 558:3
way	540:6	729:1	434:18 667:6	562:17 577:2,19
464:18,23,24 465:2	weaknesses	witness'	Wolf-56	582:15 583:6,10
465:15 469:11	695:17 696:2,4	558:23	434:21 688:25	583:12 605:25
472:19 473:4	week	Wolf	Wolf-6	606:13,17 611:1
497:9 511:18	549:20,25 646:15	429:18 432:2,8	435:3	643:24 644:11,14
522:14 553:15	646:15,23,25	433:20 436:5,12	Wolf-8	644:16,20,21
556:6 567:11	647:17	448:10 496:6	435:4	645:4,5,10 646:7
581:17 582:1	weight	508:22 575:9	Wolf-9	646:16,17,17,21
584:24 625:6,13	627:2	583:2 592:5	435:5	647:6,7,9 648:12
681:2,14 699:6	welcome	609:22 617:12	woman	648:19,20 649:15
721:17	643:3	682:23 691:9	451:6 459:18	650:21 651:9,23
ways	went	728:5 731:4,12	461:11,17 464:25	652:4,5,7,8,12,12
552:20 565:22	519:18 549:17	Wolf-20	468:5 471:16	652:16,24 653:7
	583:2 726:8	435:6	518:4,9,15,20	653:18,21,23,25

	Y			
	yeah			
	443:18 446:1	younger		
	452:20 476:20	577:15 606:9		
	516:18 521:4		Z	
	527:3 534:9 603:2		Zellers	
	609:14 619:4	430:17 432:9,11	524:9,22,24 525:5	620:24 621:20
	625:11 635:13	436:11 441:16	526:10,17,23	622:1 623:10
	653:16 660:8	442:10 443:14,19	527:21 528:5	627:8,19 629:9,24
	661:14 689:6	444:12 445:1,22	529:13,22 530:1,9	630:13 631:4
	692:3 701:20	447:12 448:5,11	532:11 533:3	632:9 633:1 634:8
	723:12	449:4,6,10,14,23	535:1 536:11	634:23 637:24
	year	450:2,8,14,20	537:21 538:2,4,7	638:17 639:8
	440:2 472:24	451:4,14 452:1,9	542:17 544:8	641:1,11,23 642:2
	589:16 592:8	452:17 453:14	546:2,14 547:12	642:4,9,22 643:2
	666:10 690:17	454:3,23 455:22	548:12 550:3,18	643:4 645:17,20
	years	455:24 457:6,8,11	552:10 553:22	645:24 647:24
	501:20 502:4 511:4	457:18 458:2,19	557:1,11,20	648:5 649:10,23
	543:6,14,19 547:2	458:24 459:20	558:18,22 559:7	650:9 651:16
	547:3 549:23,23	460:21 461:4	561:1,6,15 562:5	652:22 653:5
	570:21 571:5	462:19 463:6	562:18 563:3,11	654:11 655:4,17
	572:2,11 576:21	464:22 465:22	564:3,10,16 565:1	656:2,9 658:5
	577:7 578:7,13	466:4,17 467:12	565:23 567:7	659:22 662:1
	585:4,10 593:25	467:17 468:7	568:5,19 569:2,10	663:6,21 664:9,18
	611:5 623:15,17	469:4,21 470:5,12	570:7 571:14	665:1 666:1,16
	623:19 632:2,3	471:22 473:24	572:21 573:5	667:9 668:21
	633:23 647:10,11	475:4,7,11,18	574:25 575:8	669:20 670:7,23
	647:21,22 648:21	479:9,17 480:9,20	576:22 577:6	671:2,18 672:1,14
	668:25	481:1,22,23 482:3	578:11 579:12,18	672:21 673:7
	yeast	482:10,12 483:1	580:15 581:11,23	674:5,17 675:14
	664:11,15	483:24 485:1,12	582:8 583:1 585:6	676:1,9 677:2,12
	yesterday	486:10,14,23	587:13 588:11	678:5,14,24
	436:22 437:8	487:3,18 488:19	589:3 590:4,23	679:10,16,22
	438:20 462:3	489:15 490:1,7	591:11,16,20,25	680:14 681:1,23
	470:2,7,16 471:3	492:2 493:6,13,22	592:4 593:1,8	682:16,22 685:2
	476:18 484:10	495:3,21 496:1,9	595:10 597:8	686:1,8,17 687:3
	516:25 518:3	497:20 498:1	598:1,23 599:17	687:22 688:4,13
	520:14 527:5	499:18 500:2,12	600:9 601:15	688:17,18,20
	534:11 541:9	500:17 501:1,18	603:20 604:6,20	689:2 690:25
	543:4,25 548:20	502:2,19 503:15	605:10,24 607:12	691:17,20 692:25
	550:11 551:8	503:22 504:11,22	608:1,6,16,24	693:4 694:7,13,20
	553:10 560:6,11	505:15,24 506:7	609:9,14,21 611:7	695:3,7,14 697:23
	562:2,9 577:18	506:22 507:8,12	611:15 612:3,11	698:11 699:21
	582:12 671:10	507:14 508:9,15	613:1 614:18	700:17 701:4
	684:10 690:10,14	508:18,21 509:4	615:9 616:6,12,16	702:14,23 703:11
	young	510:4 511:5,22	616:18 617:4,8	703:16,21 704:9
	X		618:2,16,22	705:1,24 706:9

719:5,17 721:15	10	1422-CC09326-03	2	480:5,10 482:19
722:4,19 723:7,10	475:16 517:1 527:7	429:11	2	484:12,19 485:6
723:14,23 724:5	527:10 532:1,2,8	15	429:18 473:12	492:23 582:11
724:12,17 726:1	572:11 677:13,18	496:16 507:17	477:19 490:13	583:4 602:8
727:4,17,22	684:1,6,12 685:16	527:8 532:2	603:16 635:9	642:25 643:6
Zoom	686:3,23 687:15	549:23 571:4	665:3,8 703:20	666:24
431:3	687:20	572:2 619:16	2,000	2017
0	10%	633:23 647:21	484:5	602:13,14 607:10
1	10.1	15%	2:10	2018
1	471:12 472:7 475:1	517:1 675:1 676:21	621:24	444:4 490:2 572:20
453:9 471:1 544:17	10:13	677:14,18	2:21	572:24 602:12
583:15 613:10,12	508:19	154	621:25	2019
613:13 650:19	10:24	668:23	2:50	493:25 494:8 496:4
692:3,4	508:20	16	645:22	689:12,17
1,000	1000%	549:23 728:23	2:54	2020
472:2,15 473:2,16	471:18	16-2738(FLW)(L...	645:23	573:16 602:21
474:11	101	429:5	20	603:8
1.18	16.9	528:8,9 531:7	2021	429:16 432:3 436:3
646:24	429:18	535:23 543:14	497:13 498:3	
1.19	11	571:5 572:2	537:23 602:24	
647:12	524:16 525:15,18	596:19,22 711:18	640:17 643:8,13	
1.22	530:23	725:5,6,7,10	646:3 648:8 663:4	
653:23	11%	18	663:8 665:6	
1.24	530:17	585:20 641:8 642:4	711:14 728:23	
478:14	11:43	642:5 656:14	20%	
1.34	575:6	657:3	535:18,21 536:7,8	
583:13 647:1	114	187	536:8 537:12	437:5 551:2 575:23
1.36	482:25 483:7	482:16 483:5	540:7	576:6 610:2
583:13 653:23	12	19	20,000	614:11
1.53	430:8 444:5 549:17	444:5	440:3	21,000
647:11,23 648:3,21	549:19 566:16	1953	200	440:4
1:02	580:17 668:11,13	554:22	479:7	213
575:7	12,000	1957	200,000	430:20
1:12	632:3	622:16	720:11	218
582:24	1215	1970	2000s	430:3
1:14	445:7	584:4	568:2 666:9	22
582:25	1216	1980	2001	437:15 595:16
1:24	445:7,23	464:5,20	662:23 663:5,7	23
592:2	122	1985	2012	448:20 477:20
1:27	646:24	633:16 634:3	563:2 564:1,24	576:6
592:3	13	1987	2013	23,000
1:47	444:4 580:17 619:2	549:21 572:23	481:24 482:11	474:4
609:19	619:4,5	573:6	484:12	24
1:56	14	1998	2015	437:15 439:18
609:20	429:16 432:3 436:3	554:19	549:13,20 584:4	462:13,20 463:7
622:3,3 642:3	1999	2016	241	
646:22	492:22			496:3

246	30%	4:41	431:5	51
598:7,14,19	528:8 537:11 540:7	727:25	47	634:18
25	651:25	40	497:21 538:1,3,5	515
619:6	300	444:6 535:22 543:6	470	430:18
250,000	431:4 440:1	543:19 547:2,3	435:7	52
720:16	300,000	589:22 591:18	48	640:21 692:4
2500	440:1	592:12 611:5	595:5	53
431:4	30601	632:2,3	480	655:22 656:4
26	430:14	40%	433:11	54
598:5 711:7	317)237-0300	524:12 525:23	482	567:23 661:19
269-2343	431:5	528:9 530:20	433:14	662:3
430:4	320	531:7 535:23	483	55
27%	430:14	41	597:9	567:23 667:4
524:16 525:16,18	322	445:5	49	56
530:24	636:16 637:1	42	615:3 616:25 623:8	688:23 689:25
272	324	452:10	623:11 659:3,4	5600
598:3,13,17	635:21 636:8,12	42nd	49,000	549:25
275	325	430:19	474:3	57
430:9	698:12	43	490	623:12,13
28	334	480:11 726:12	433:17	575
551:3	430:4	430	496	435:4
29	341	432:5	433:20	58
574:13	484:22 485:13	430-3400	497	458:7 460:3
29.5	35%	430:20	433:22	590
644:20 645:5	651:25	436	<hr/> 5 <hr/>	432:22
651:25	35.8	432:6,9 435:3	591	
2B	644:19 645:4	44	432:23	
606:13 607:6	36	482:5	595	
<hr/> 3 <hr/>	725:8,11	440	434:2	
3	36104	430:13	5th	
476:23 477:17	430:4	444	689:12,16	
596:3,25 606:14	37	433:3	<hr/> 6 <hr/>	
607:6	470:3,4 474:18	445	6	
3,000	583:11 703:14	433:6	436:23 437:6,16	
484:5	39	45	463:10 720:13	
3:37	524:12 525:9	490:2 585:10	6.6	
682:20	<hr/> 4 <hr/>	4500	668:25	
3:49	483:3 524:10 583:7	484:6	6/18/21	
682:21	433:9	452	434:2 595:7	
30	596:17 598:10	472:8		
511:4 535:23 543:6	46	50		
543:14,19 574:8	606:14 607:7	618:17,24	60	
583:9 589:22	635:18,23 645:13	50%	577:7 578:6,7,9,10	
591:17 592:11	4,000	537:10	578:13 632:2	
680:10 728:11	484:6	500	60-year	
729:16	4/18/19	584:5	578:2	
	525:9 530:17	46%	535:19,22	
	434:8 634:20	500,000	60%	
		46204	578:2	

605	432:15	929	
638:1	731	635:17,20 637:25	
60s	432:16	932	
568:2	732	596:16,19 597:9	
610	432:17	949)688-1799	
435:5	75%	430:10	
615	606:13		
434:4	7th		
618	494:8		
434:6			
62	8		
613:4	8		
62-63	483:22 575:20		
613:9	576:7		
634	8,525		
434:8	483:22		
640	8:53		
434:10	429:19 436:3		
655	80		
434:13	549:14		
661	80s		
434:15	543:20 546:22		
667	815		
434:18	484:2		
688	85%		
434:21	677:20		
691	87		
432:10 435:6	572:19		
699	877.370.DEPS		
507:16	429:24		
7	9		
7	9		
463:8 498:14 656:5	538:13 539:4,5		
7/9/2024	610:12 619:17		
728:22	90%		
70	697:24		
530:20,23 549:14	90071		
706)354-4000	430:19		
430:15	90s		
709	666:7		
432:11	91%		
722	542:8 544:10		
432:12	917.591.5672		
728	429:24		
432:14	92660		
730	430:9		